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DO WOMEN GAIN OR LOSE FROM BECOMING MOTHERS? A COMPARATIVE WAGE ANALYSIS IN 20 EUROPEAN COUNTRIES

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Do women gain or lose from becoming mothers? A comparative wage analysis in 20 European countries

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Abstract (en)

This paper analyses disparity in women's pay across 20 European countries using EU-SILC 2006. First, a selectivity-adjusted gender pay gap is computed and examined in each of the countries. Next, the impact of parenthood is analysed. We show that women suffer a wage disadvantage compared with men all over Europe. Motherhood usually reinforces the gender gap but discrimination is more sex- than maternity-related so that it concerns all women as (potential) mothers. Fatherhood has a positive impact on men's wages. Finally, in most countries, the wage gap between mothers and fathers is even deeper than that between women and men.

Keywords: wage gap estimation/decomposition, gender, parenthood.

Jel Codes: C21, J24, J31, J71

Summary

This paper analyses the variety in women's pay across 20 European countries using harmonised and comparable EU-SILC 2006 data. In a first step, the gender pay gap is documented upon. Next, the impact of parenthood status is analysed. We do not confine wage gap measurement and analysis to a pure human capital model but instead regress wages on a large number of independent variables (occupational status, industrial affiliation, firm size, and so forth). To estimate the wage equations we use standard OLS with White (1980) heteroskedasticity consistent standard errors. The dependent variable is the logarithm of the hourly gross wage in euros. Given the potential bias in the estimates since standard OLS estimates are computed for each individual conditional upon his/her sex and parenthood status, we have applied a two-stage Heckman (1979) procedure to let the models at least account for systematic selection of women and men into employment (not into parenthood). These selectivity-adjusted gender wage gaps are then decomposed using the Oaxaca-Ransom (1994) method in a gap that is explained by differences in observable characteristics and a gap that is due to different returns to identical characteristics or to unobserved heterogeneity. Our country-specific samples contain partnered prime-age male and female employees (aged between 20 and 49 years), either in part-time or full-time work.

A first finding is that women suffer a wage disadvantage compared with men all over Europe. Correcting the selectivity bias leads to increase gender wage differentials in half of the countries studied but decreases them in the other half. The countries studied show great variety in the size of the price effect without there being any correlation with the size of the selectivity-adjusted gender wage gap.

Motherhood usually reinforces the gender wage gap but discrimination is more sex- than maternity-related so that it concerns all women as potential mothers. In general, the motherhood wage penalty is smaller than the gender wage gap. Two countries even offer a sizable wage bonus to mothers as compared with non-mothers. The size of the price effect is similar to the case of the gender wage gap but decomposition results show a lower degree of statistical significance.

A few exceptions aside, fatherhood has a positive impact on men's wages. Only in four countries is there a penalty associated with fatherhood whereas in fifteen countries, fathers have a substantial wage advantage as compared with men without children in their households. In the UK, fathers and non-fathers appear to earn an identical wage.

Finally, we have computed the wage gap between mothers and fathers to underscore that motherhood generally worsens women's wages whereas being a father tends to have a positive impact on men's wages. The raw wage gap between mothers and fathers varies between 6% of an average mother's wage in Hungary and 55% in Estonia. Parenthood thus deepens the gender wage gap (except for Italy, Slovenia, Hungary, Cyprus, and the Czech Republic).

In sum, despite the fact that EU member states share the well-known *acquis communautaire* which in terms of employment yields a wide set of rules and objectives to achieve professional equality between men and women, a high level of wage inequality persists, especially when studied along gender and parenthood lines. The conclusion to this analysis explores its major policy recommendations.

Introduction

The European Community Household Panel survey (ECHP) was a pioneering data collection instrument. It was launched in 1994 but expired in 2001. In the meantime, the EU was enlarged from 15 to 25 member states (and in 2007 to 27 member states). In line with this geographical change, the ECHP was replaced with a new data collection process, the EU-SILC (European Statistics on Income and Living Conditions), the first wave of which, 2003, covered seven countries of which six member states (Belgium, Denmark, Greece, Ireland, Luxembourg and Austria) and Norway. The 2004 wave included 14 countries, the 2003 ones plus France, Spain, Italy, Portugal, Finland, Sweden and Estonia. As of the third wave with 2005 data, the survey covers 27 countries, the EU-25 and Iceland and Norway[1]. EU-SILC is expected to become the reference source of statistics on income and social exclusion in the European Union.

Data collection under the EU-SILC regulations displays some important differences from its predecessor, the ECHP. Their impact can be significant, depending on the country and the indicators concerned. This paper aims at exploring the information this new data base yields in terms of wages. We analyse the variety in women's pay across 20 European countries using the fourth wave of EU-SILC data relative to the year 2006[2]. In a first step, the gender pay gap is documented upon. Next, the impact of parenthood status is analysed.

Sex and parenthood status are treated in this paper as the main criteria to distinguish between workers. However, whether, women, men, parents, or non-parents, wages are generally to a large extent determined by human capital, occupational status and industrial affiliation. Wages are therefore regressed on a large number of independent variables. In other words, we do not confine wage gap measurement and analysis to a pure human capital model. In this paper, we first compute raw wage gaps (in the case of the gender wage gap we correct for selectivity bias applying the Heckman procedure) which we then decompose in a gap that is explained by differences in observable characteristics and a gap that is due to different returns to identical characteristics. Unobserved heterogeneity is also captured in this last gap.

A first finding is that there is great variety in the size of wage gaps across Europe but the impact of gender and parenthood status is crucial in all countries. The gender wage gap is well documented upon. For instance, in 2006, a report was published by the Equality Unit of

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[1] The fourth wave of EU-SILC data relative to the year 2006 does not yet include Bulgaria and Romania although they have become members of the EU in the meantime.

[2] Note that for Malta and Latvia, no reliable gross hourly wage measure can be computed from the EU-SILC data base. Moreover, too small numbers of mothers (resp. Fathers) respected our sample definition so that computation of the wage gap between mothers and non-mothers, between fathers and non-fathers, and between mothers and fathers was made impossible in the five Nordic countries, Denmark, Finland, Sweden, Iceland and Norway. However, the gender wage gap with selectivity correction will be analysed for four of these countries (Iceland, Finland, Sweden and Denmark).

the European Commission on the gender wage gap in the EU-25 based on the European Structure of Earnings Survey (excluding the public sector, health care and education) for 2002 (Plantenga and Remery 2006). The gender pay gap is calculated as the difference between men's and women's gross hourly wage as a percentage of men's average gross hourly wage. The largest gap is found in the UK (30%), the smallest in Slovenia (11%). Much less empirical analyses have focused on the wage effect of having young children in the household. The presence of young children in the household not only has a depressing impact on female labour market participation rates but it also affects wages through a reduction of working hours. The inverse generally holds true for men as fathers tend to work and earn more than men without children. Besides affecting participation and working hours, parenthood status in itself is usually associated with a pay penalty for mothers and a wage bonus for fathers thus deepening the gender wage gap. The effects of maternity on women's wages were analysed for 10 European countries by O'Dorchai and Sissoko (2009 forthcoming) based on a sample of pooled ECHP data for the period 1996-2001. They found the raw wage gap between non-mothers and young mothers, i.e. mothers who had their first child before the age of 25, to vary between -22% in the UK and a bonus of 11% in Greece.

In sum, despite the fact that EU member states share the well-known *acquis communautaire* which in terms of employment yields a wide set of rules and objectives to achieve professional equality between men and women, a high level of wage inequality persists, especially when studied along gender lines. This paper aims to quantify this inequality from different angles using the new EU-SILC database.

Review of the literature

The economic literature advances several reasons for the existence of a gender pay gap, related to human capital (Mincer and Polachek 1974), the wage structure (Blau and Kahn 1996), domestic (home and childcare) responsibilities (Albelda et al. 1997), equality legislation and discrimination (Becker 1971). Whereas today, in most countries, women have higher educational qualifications than men, they remain underrepresented – because of educational segregation – in the most valued fields of study (engineering, science, and so forth). Moreover, the division of household and care work is still very gender-biased so that many more women than men interrupt their careers or reduce their working time and as such lag behind in terms of skill acquisition and experience. Moreover, women are frequently confined to jobs that are ranked at the lower end of the occupational hierarchy (Bergmann 1989). This at least partly reflects the workings of the glass ceiling that prevents women from reaching high-responsibility positions even when they have the necessary abilities but also the fact that female-dominated occupations are frequently undervalued (Albrecht et al. 2003, Arulampalam et al. 2004, Levine 2003). The overall structure of wages is another

determinant of the observed wage gap between women and men (Blau and Kahn 1996). A concentrated wage distribution and a legally defined minimum wage improve women's earnings, especially of the lowly qualified. The wage structure is influenced by the bargaining system (Blau and Kahn 1997). Centralised wage bargaining enhances wage equality. However, even a centralised system has little leverage if it covers only a small proportion of the work force (the example of the UK). Over the past decade most member states have evolved towards decentralisation and fragmentation of the wage setting process and towards a reduction of the minimum wage. This trend works against policies to tackle the gender pay gap.

Besides their sex, women's wages undergo the negative effects of maternity. Given that almost all women are mothers, the motherhood wage penalty is relevant within the larger context of gender inequality. Economic theory helps to understand the family pay gap from two angles: household production (Reid 1934, Lancaster 1971, Ironmonger 1972, Becker 1981) and human capital (Mincer 1962, 1974, Ben-Porath 1967, 1970 and Becker 1975, 1985).

The theory of household production explains how utility-maximising households or individuals use time and market goods to produce welfare-enhancing outputs. Household income thus decreases with time spent at activities other than work, as such time is implicitly valued at the market wage rate.

From a human capital point of view, time outside the labour market may be interpreted as a disinvestment or depreciation in accumulated human capital, resulting in decreased market productivity and a lower earning potential. During career interruptions, women not only fail to accumulate work experience but they also lose specific human capital and market skills and they forego on-the-job training opportunities.

The residual pay gap between mothers and non-mothers may be due to the selection of less productive women into childbearing, a selection that is driven either by unobserved heterogeneity (Heckman and Willis 1977) or by endogenous fertility (Gustafsson 2002, Gustafsson et al. 2003, Del Boca and Repetto-Alaia 2003). Children reduce women's productivity not only through a human capital effect but also through a diversion of effort from market to home activities, as children raise the relative return to the latter and decrease that to the former. With endogeneity of fertility, the following is meant. Given that women are free to choose whether or not to have children, they will be more likely to do so if the cost of children is low. Since the market wage they forego when they decide to have children is an important component of the cost children entail, the lower this wage the lower the cost, and, thus, the more women will be likely to decide in favour of having children.

Furthermore, past spells of part-time employment (most frequently opted for in the family formation period) have long-term wage effects (Ben-Porath 1967, 1970, Becker 1975, 1985). These theoretical foundations for the family gap in pay are broadened by the empirical identification of other and more precise factors that have an influence on its size. Besides

part-time work, mothers' "preference" for other "family-friendly" work arrangements (jobs that are more compatible with family life because they offer convenient hours, are close to the home, and so forth) entails negative wage effects. Indeed, mothers trade off earnings for increased flexibility. The more employers are monopsonistic, i.e. have wage-setting power, the more earnings women will have to trade in to obtain greater flexibility.

The national institutional context, and in particular the nature of overall labour market regulation, and family policies are other determinants often advanced in the literature. Besides reducing the gender pay gap, wage-compressing institutions tend to weaken the price effect of motherhood by setting a floor on mothers' wages. Extensive family policies potentially contribute to achieve parity between mothers and non-mothers. In this respect, the positive impact of public childcare is straightforward, unlike that of leave systems which may either raise mothers' relative earnings by allowing them to accumulate experience and remain attached to the firm or, when leaves are long, cause female participation rates to drop and damage future career and on-the-job training opportunities, which in turn decrease earnings.

Lastly, women with children may be less well-paid simply because of discrimination or employer preferences for childless women (because they believe mothers to be less productive).

Estimation approach

The purpose of this analysis is to quantify the main reasons for the difference in the hourly gross wage rate of similarly skilled women and men working in similar jobs. To achieve this, we use a straightforward estimation method. For each of the 20 countries in our sample, semi-logged wage equations are estimated for female (f) and male (m) workers, for mothers (mo) and women without children (nmo) and, finally, for fathers (fa) and non-fathers (nfa):

$$\log(W_f) = \beta_f X_f + \varepsilon_f \tag{1a}$$

$$\log(W_m) = \beta_m X_m + \varepsilon_m \tag{2a}$$

$$\log(W_{mo}) = \beta_{mo} X_{mo} + \varepsilon_{mo} \tag{1b}$$

$$\log(W_{nmo}) = \beta_{nmo} X_{nmo} + \varepsilon_{nmo} \tag{2b}$$

$$\log(W_{fa}) = \beta_{fa} X_{fa} + \varepsilon_{fa} \tag{1c}$$

$$\log(W_{nfa}) = \beta_{nfa} X_{nfa} + \varepsilon_{nfa} \tag{2c}$$

The dependent variable (log (W_f) for women, log (W_m) for men, log (W_{mo}) for mothers, log (W_{nmo}) for non-mothers, log (W_{fa}) for fathers, and log (W_{nfa}) for non-fathers) is the logarithm of the hourly gross wage in euros. In some countries, this wage measure can be derived from income reported for the actual period and in others from income reported for the reference period (the year preceding the date of interview). The first group of countries includes Greece, Italy, and Portugal. The second one Austria, Belgium, Spain, Poland, Cyprus, the Czech Republic, Germany, Estonia, France, Lithuania, Luxembourg, the Netherlands, Slovenia, Slovakia, Hungary, Ireland and the UK (and Denmark, Finland, Sweden and Iceland for the gender wage gap analysis, cfr. note 2). Gross hourly wage includes usual paid overtime, tips, commissions, supplementary payments (13th or 14th month), holiday pay, profit shares, and bonuses. However, income from investments (assets, savings, stocks, and shares) is excluded.

The explanatory or independent variables on the right-hand side of the different equations that are captured by the vectors X with the appropriate indices include:

- *personal characteristics* such as marital status (a dummy variable, the reference being "not legally married"), region of residence (dummy variables that are available only for ten countries and that vary in number according to the country considered: Austria (3), Belgium (3), the Czech Republic (8), Germany (6), Spain (7), France (9), Greece (4), Hungary (3), Italy (3) and Poland (6)), and, in the gender wage gap analysis only[3], country of birth (three dummies indicating whether the person was born in the same country as where he or she is living, in another EU member state or in a non-EU country, the first possibility being used as the reference; note that this dummy is not available for Denmark and that for Slovenia only two outcomes exist: born in the country of residence or in a non-EU country) and a dummy to indicate the presence of young children (less than 15 years of age) in the household;

- *human capital indicators* such as level of education (measured by 3 categories – lower secondary at most, upper secondary at most or post-secondary tertiary or non-tertiary education – with the lowest level as the reference category), and, in the gender wage gap analysis only[4], experience measured as the number of years spent in paid work (Austria, Belgium, Cyprus, the Czech Republic, Estonia, France, Spain, Italy, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, Slovenia, and Slovakia) or approximated by age (Germany, Denmark, Finland, Greece, Hungary, Ireland, Iceland, Sweden, and the UK), the square and the cube of the experience indicator, and, in the analysis of parents' wages, instead of experience, age, its square and its cube;

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[3] Country of birth was not included in the wage equations for mothers, non-mothers, fathers, and non-fathers because given the large number of missing values for this variable, including it would have excessively reduced the sample sizes of these populations. The dummy indicating the presence of (a) child(ren) has no place in the wage equations for mothers, non-mothers, fathers and non-fathers since it already serves as the criterion to distinguish between these populations.

- *job and firm characteristics* such as 27 occupational dummies corresponding to the second level of the International Standard Classification of Occupations (ISCO-88)[5] with office clerks as the reference, 12 industry dummies corresponding to the 1-digit NACE-codes[6] with the enlarged manufacturing sector as the reference, a dummy capturing contract type (permanent versus temporary employment contract with a permanent contract as the reference; this dummy is not available for Denmark), a dummy indicating whether the person is working part-time (a part-time worker is defined as someone who has worked part-time throughout the whole of the income reference year and whose usual weekly working hours are below 30), and, in the gender wage gap analysis only[7], a dummy indicating whether the individual supervises other workers or not, and establishment size measured by the number of employees in the local unit.

The ε terms with the appropriate indices are the usual errors terms.

To estimate the wage equations we use the standard Ordinary Least Squares technique (OLS) with White (1980) heteroskedasticity consistent standard errors. Given the potential bias in the estimates since standard OLS estimates are computed for each individual conditional upon his/her sex and parenthood status, respectively, we have applied a two-stage Heckman (1979) procedure to let the model account at least for systematic selection of women and men into employment (not into parenthood). Sample selection bias refers to problems where the dependent variable is observed only for a restricted, non-random sample. In our case, it is indeed so that wages are observed only for people at work. Heckman's selection correction model proposes a two-step estimation where in the first stage a probit model is used to predict the probability of being at work and in the second stage, the inverse Mills' ratio is included as a regressor in the wage equations.

The first step of the two-step approach estimates a probit model of participation. The estimated coefficients from this probit model are then used to construct consistent estimates of the inverse Mills' ratio term (λ). In the second stage, the wage equations including both the original X-vector variables and the constructed value of the inverse Mills' ratio are estimated by OLS.

$$\log (_{W_f}) = \beta_f X_f + \varepsilon_f + \delta_f \lambda_f \tag{1d}$$

$$\log (_{W_m}) = \beta_m X_m + \varepsilon_m + \delta_m \lambda_m \tag{2d}$$

Because of the non-linearity of the inverse Mills' ratio, the bivariate normal selection model is formally identified even without exclusion restriction. However, such a restriction is

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[4] Experience was not included in the wage equations for mothers, non-mothers, fathers, and non-fathers because given the large number of missing values for this variable, including it would have excessively reduced the sample sizes of these populations. Age (and its square and cube) was included and may serve as a proxy of labour market experience.

[5] Occupational categories 8 and 9 are taken at the 1-digit level and occupational classes 71 and 72 are dropped.

[6] Sections A (agriculture, hunting and forestry) and B (fishing) were pooled and also sections C (mining and quarrying), D (manufacturing) and E (electricity, gas and water supply), and sections O (other community, social and personal service activities), P (private households with employed persons), and Q (extra-territorial organisations and bodies).

[7] Information on supervision responsibilities and on firm size was omittedfrom the wage equations for mothers, non-mothers, fathers, and non-fathers for the same reason experience and country of birth were excluded.

necessary to avoid collinearity between the predicted inverse Mills' ratio terms and the other covariates in the wage equations. An exclusion restriction implies that there is at least one variable in the labour market participation equation that does not appear in the wage equations. To increase variation, we have used not one but several of such instrumental variables. Indeed, the participation equation has the following variables in common with the wage equations: marital status, country of birth, education, and for those countries where experience is proxied by age, also age and its square. On the contrary, variables that help to explain the participation probability but do not intervene in wage determination are: the number of children, the presence of a child aged 0-2 years of age, the presence of a 3-5 year-old or that of a 6-14 year-old, the ability to make ends meet (6 dummies specifying the level of difficulty experienced by the household in making ends meet, from "very easily" to "with great difficulty"), home ownership (a dummy variable that indicates whether or not the person lives in a household that owns the accommodation), degree of urbanisation (three dummies indicating the population density in the area, "thinly", "densely" or intermediate; this variable is not available for Slovenia nor for the Netherlands), the partner's gross hourly wage (not for the Netherlands), the partner's participation status (a dummy that equals 1 if the partner is working full-time or part-time and 0 if the partner is unemployed, studying or accumulating unpaid work experience, (early) retired, has given up his/her business, permanently disabled and/or unfit to work, in compulsory military or community service, fulfilling domestic tasks and care responsibilities or inactive in any other way) and total household disposable monthly income excluding earned wages (not for Germany, Cyprus, Slovakia and the Netherlands).

Once the wage equations were estimated, the Oaxaca and Ransom (1994) procedure was applied in order to decompose each wage differential into a characteristics/endowment effect and a price/remuneration/"discrimination" effect. We explain the method for the first set of wage equations that allow to estimate the gender wage gap. However, the method for the two remaining sets of equations to compute, respectively, the wage gap between mothers and non-mothers, between fathers and non-fathers and between mothers and fathers can be deduced in a perfectly straightforward manner (disregarding the first stage of the Heckman process that was only applied to the wage equations confronting men and women).
Oaxaca and Ransom (1994) expressed the decomposition of the raw wage gap as follows:

$$\overline{\log(w_m)} - \overline{\log(w_f)} = \left(\overline{Y}_m - \overline{Y}_f\right)'(W\hat{\beta}_m + (I-W)\hat{\beta}_f) + ((I-W)'\overline{Y}_m + W'\overline{Y}_f)'\left(\hat{\beta}_m - \hat{\beta}_f\right) \qquad (3)$$

where the indices m and f refer to men and women respectively, $\overline{\log(w)}$ represents the average of the logarithm of hourly gross wage, and $\overline{Y}$ is a vector containing the mean values of the explanatory variables (personal characteristics, human capital characteristics, and job and establishment features), W is a matrix of relative weights given to the coefficients of the

group of men and I is the identity matrix. The first term on the right-hand side of the equation sign represents the share of the gender wage gap that is due to differences in observable characteristics between female and male workers. In other words, if both women and men were remunerated as in the reference case, how do their differing characteristics affect their respective wage rates? The second term measures the part of the wage gap explained by differences in the returns to observable characteristics. In other words, if both women and men were endowed as in the reference case, how does the fact that their characteristics are differently remunerated affect their respective wage rates? This term is often referred to as the discrimination component or the price effect.

Furthermore, Oaxaca and Ransom (1994) show that

$$\hat{W} = \Omega = (Y_m{}'Y_m + Y_f{}'Y_f)^{-1}Y_m{}'Y_m \tag{4}$$

with Y as the observed data matrix, is equivalent to using the coefficients from a pooled model over both groups of men and women as the reference coefficients.

The selectivity bias correction for both sexes needs to be handled within the decomposition of the raw gender wage gap. When applying the Heckman two-step regression technique, we are able to distinguish the endowment and remuneration effects from the selection effect. This gives us an idea of what the wage distribution of women, and hence the wage gap, would look like in the absence of sample selection. The selection correction terms enter the wage decomposition as follows:

$$gap = \left(\overline{Y}_m - \overline{Y}_f\right)'(W\hat{\beta}_m + (I-W)\hat{\beta}_f) + ((I-W)'\overline{Y}_m + W'\overline{Y}_f)'\left(\hat{\beta}_m - \hat{\beta}_f\right) + (\overline{\hat{\lambda}}_m\hat{\theta}_m - \overline{\hat{\lambda}}_f\hat{\theta}_f) \tag{5}$$

raw wage gap = (endowment effect) + (price effect) + (selection effect)

where $\hat{\theta}$ is an estimate of $\rho\sigma_\epsilon$.

The first two terms of the right-hand side in equation (5) are the familiar endowment and price components. However, it is not obvious how the last term in equation (5) should be treated in the overall decomposition scheme, that is, whether it should be attributed to differences in endowments or included in the price effect. Several variants are found in the literature.

In most studies, the last term on the right-hand side of equation (5) is subtracted from the observed wage gap on the left-hand side. In this form the left-hand side provides a measure of the difference in potential or offered wages, in contrast to observed wages realized only by those participating in the labour market (see among others Oglobin 1999). The studies which proceed in this way find that the existence of a sample selection bias implies that the "offered wage gap" greatly exceeds the observed wage gap. However, this empirical result is obtained with $\hat{\theta}_m = 0$ and $\hat{\theta}_f > 0$ (no selection for men, positive selection for women, that is, positive correlation between unobservables in the wage and participation equations) and is

therefore by no means general. When presenting our results we will show they are indeed less straightforward, dividing the countries in our sample in two groups of roughly equal size where, in one, selectivity bias correction increases the gap and, in the other, it decreases it. Thus the impact on the remuneration and endowment effects of taking the correction of sample selection into account is ambiguous.

Since we are interested in evaluating the absolute wage gap between female and male workers, the logged hourly wages and wage differential should be transformed into monetary terms. To do this, the methodology recommended by Stewart (1983) and Rodgers (2004) is applied. We use the exponential function to rewrite the difference in predicted mean log hourly wages in monetary terms.

The wage difference:

$$\overline{\log(w_m)} - \overline{\log(w_f)} = \hat{\beta}_m \overline{Y}_m - \hat{\beta}_f \overline{Y}_f = \hat{\gamma} \qquad (4)$$

is re-expressed as :

$$\overline{w}_m / \overline{w}_f = \exp(\hat{\gamma}) \qquad (5)$$

We can then easily rewrite the gender wage gap we are interested in as:

$$(\overline{w}_m - \overline{w}_f) / \overline{w}_f = \exp(\hat{\gamma}) - 1 \qquad (6)$$

Data and variables

The data used in the present paper are taken from the 2006 wave of the new EU-SILC data base which replaced the former European Community Household Panel after its expiration in 2001. Just like its predecessor, EU-SILC provides harmonised data on households and individuals, related to employment, family situation, housing, income, health and social life for seven European countries in its first 2003 edition, for 14 countries in the 2004 wave and for as many as 27 European countries as of 2005. It is the only European data base that provides adequate information on children and labour market outcomes for all EU-25 Member States plus Norway and Iceland.

Rather limited sample sizes and variety in the number of variables available for each of the countries are amongst its main flaws. Furthermore, EU-SILC still suffers from some negative beginner's features. Indeed, recorded data still show inconsistencies and non-response rates remain high for some variables.

According to the country considered, the number of observations ranges between 6,744 for Iceland (3,406 men and 3,338 women) and 47,311 for Italy (22,596 men and 24,715 women).

In our sample we have retained part-time and full-time workers between 20 and 49 years of age. This sample includes employees but also self-employed and family workers as long as their full-time/part-time status can be derived and their monthly earnings observed. Moreover, labour market decisions are very different for single women than for those in a couple. Because they have less financial constraints (at least when their partner has an income), women in a couple tend to have a higher degree of employment sensitivity to the presence of a child. Given the very different labour market behaviour of single mothers and those living with their partners, it would have been too simplistic and even erroneous to group both categories under the unique header "mothers" (Gornick et al. 1998). Therefore, in this paper, we have retained only women living with their partners, whether married or not. Finally, observations were lost due to restriction of the sample to workers for whom information on all variables used in the analyses was available and to data inconsistencies.

Taking into account sample attrition, the size of the final samples used ranges between 503 in Iceland (273 men and 230 women) and 4,155 in Italy (1,938 men and 2,217 women). Women's share of the total number of observations retained varies between 46% in Iceland and 55% in Slovenia.

Note that EU-SILC data only allow to identify children as long as they are in the household. For the present analysis we have therefore defined mothers as women with at least one child living in the household. The category of non-mothers thus includes three subgroups of women: (1) mothers whose child(ren) has (have) left the household, (2) women who have not yet had a child but will have one in the future, and, finally, (3) women who will never become mothers, the true control group for the analysis of the wage gap between mothers and non-mothers. It is impossible to separate this last subgroup from the two first ones as the EU-SILC only yields information on children present in the household. However, by considering only relatively young women (between 20 and 49 years of age), we do limit the size of the first subgroup and thus the number of mothers that are counted as non-mothers because of data limitations. Fathers are defined in the exact same way as mothers. We are aware that these definitions and methodology fail to account for any long-term wage effects of parenthood.

The size of our samples of mothers varies between 78 mothers in Luxembourg and 763 in Poland. As little as 7% of all women are mothers in the Netherlands, Luxembourg, the UK, and Ireland, as many as 30% in Slovakia. For fathers, sample sizes range from 68 in Ireland to 491 in Poland. As little as 4% of all men are fathers in the Netherlands, the UK and Luxembourg, as many as 18% in Slovakia. Among parents, mothers have the lowest share as compared with fathers' in Luxembourg and Spain (52% of mothers versus 48% of fathers) and the highest in Slovenia (70% of mothers versus 30% of fathers). Note that the retained country samples remain representative of the respective target populations.

Descriptive statistics

The degree of disparity in the level of the hourly gross wage is enormous across Europe, varying between as low as 2.41 EUR or slightly more for men in Lithuania and Slovakia, and above 20 EUR in Luxembourg (20.64 EUR), Ireland (20.90 EUR), the Netherlands (21.03 EUR), Iceland (23.41 EUR) and Denmark (24.33 EUR). In all countries, women's wages are lower by between 11% (Belgium) and 50% (Sweden). Correcting the selectivity bias widens the range of the gender wage gap. The selectivity adjusted wage difference between men and women varies between 3% in Lithuania and 53% in Estonia.

In 13 of the 20 countries under scrutiny, non-mothers earn a higher hourly gross wage than mothers. The motherhood wage penalty varies between 1% in Hungary and Poland and 21% in the UK. However, the inverse is observed in Belgium and Cyprus and to a lesser extent also in Slovakia, Germany, Ireland and Slovenia. Mothers' wage surplus as compared with non-mothers' wages in these countries varies between 1% (Slovenia and Ireland) of a mother's wage and 18% (Cyprus). Motherhood status seems to have no (neither positive nor negative) wage effect in Italy.

In 15 of the 20 countries under scrutiny, fathers earn a higher gross hourly wage than non-fathers. The fatherhood bonus ranges from 2% in the Czech Republic to 20% in Ireland. Because of fatherhood, men suffer a 10% wage penalty in Luxembourg. In Hungary, Estonia, Lithuania and the UK, the wage effect of fatherhood is also negative but the penalty is extremely weak, below 2%.

The difference between mothers' and fathers' wages is most substantial, rising up to 55% of an average mother's wage in Estonia. It is above 50% also in the Netherlands and the UK.

In most countries, men and women are roughly of the same age at the mean, between 37 and 41 years of age according to the country considered. Men and women are slightly younger in Luxembourg, at 36 and 35 years of age respectively. Men are slightly older (by two years) in Cyprus, Spain and Greece and women in Greece and Italy. Fathers are usually much older than men without children, the age difference varying between 9 and 12 years. Mothers also tend to be older than non-mothers. The age difference ranges from 8 years in Germany to 12 years in Spain, Ireland, Poland and Slovakia.

The proportions of women and men that are legally married are very similar in all countries. Parenthood systematically increases the likelihood of being married for men. Paternity has a huge impact on marriage rates (above 10 percentage points) in Estonia, Spain, Hungary, Slovenia, Ireland, and especially the UK, Luxembourg, the Netherlands, France and Belgium. For women, most countries put forth less sizable proportions of married mothers than of married women in general. The difference between mothers' and non-mothers' marriage rates is largest in Lithuania where mothers' marriage rate is 27 percentage points below that of women in general, but also in Poland (11 point gap), Slovakia (11 point gap) and Greece

(10 point gap). In Austria, the Netherlands, France, Belgium and the UK, mothers are more frequently married than non-mothers, the difference ranging from 1 percentage point in Austria to 9 percentage points in the Netherlands.

Whereas in most countries, the highest shares of men are either medium or high educated, four countries deviate from this overall trend, three southern European countries and Luxembourg. Indeed, in Luxembourg, Spain, and Italy, respectively 33%, 33%, and 37% of men are low educated and in Portugal, this proportion raises even higher, to 67%. Particularly high shares of men with a high level of education (above 50%) are observed in Belgium, Ireland, and Lithuania but in seven other countries also, more than 40% of men have a degree in post-secondary tertiary or non-tertiary education. Women are generally more highly educated than men with the exception of the Czech Republic and Germany. Countries with the largest shares of highly educated women are Lithuania (73%), Estonia (60%), Ireland (59%), Belgium (58%), Finland (55%), Cyprus (52%) and Iceland (50%). The most remarkable gender difference in education is observed in Estonia where the proportion of highly educated women almost doubles that of men whereas the proportion of men who have completed upper secondary education at most almost doubles that of women. A very similar trend is observed in Lithuania. Amongst the low-educated, the most important gender differences are observed in Austria where the share of women exceeds that of men by 9 percentage points but also in Ireland and Italy where, on the contrary, the proportion of low-educated males is higher by 8 percentage points as compared with that of women.

A few exceptions aside, non-fathers are generally (considerably) better educated than fathers. The exceptions are Lithuania and Slovakia where there does not seem to be a fatherhood gap in educational attainments. In some countries, the share of highly educated men without children more than doubles that of highly educated fathers. This is the case in Greece, Portugal, France, and Luxembourg. In general, mothers are also less well educated than women without children with the exception of Lithuania. The difference is largest in Spain at 28 points (51% of highly educated non-mothers versus 23% of mothers), Greece at 23 percentage points (51% of highly educated non-mothers versus 28% of mothers) and Luxembourg also at 23 points (32% of highly educated non-mothers versus 9% of mothers). But there is a more than 20 percentage point gap also in Belgium, Cyprus, France, Italy, and Poland.

Experience, measured as the number of years spent in paid work, is used only in the wage equations for men and women that serve to compute the gender wage gap. It was not included in the wage equations comparing mothers, non-mothers, fathers and non-fathers because, given the large number of missing values for this variable, including it would have excessively reduced sample sizes. It is available for just fifteen countries. Men generally have more labour market experience than women, the difference varying between one year in

Slovakia, Slovenia, Poland, and Lithuania and five years in Austria. In Belgium, no gender difference is to be observed.

A high level of disparity is observed across the different populations in terms of the prevalence of part-time work. The proportion of female workers in part-time jobs is relatively low in Slovenia (1%), Slovakia (3%), Estonia (4%), Portugal (4%), the Czech Republic (6%), Hungary (6%), Lithuania (6%), Poland (6%), Cyprus (7%), Greece (9%), and Finland (10%). It is extremely high in the Netherlands (62%) and Germany (58%). In the remaining countries between 16% (Iceland and Denmark) and 40% (Luxembourg) of women hold part-time jobs. Mothers more frequently do part-time work than non-mothers, except in Estonia, Hungary, Poland, and Slovenia, all countries where part-time work remains very scarce. In the UK, roughly equal shares of mothers and non-mothers are in part-time employment. The widest gaps in part-time work between mothers and non-mothers are found in Luxembourg (22 percentage point gap), Belgium (19 point gap) and Ireland (17 point gap). The proportions of male part-time workers are much lower, ranging between 0% in Cyprus, the Czech Republic, Greece, Luxembourg, Portugal, Slovenia, and Slovakia and 4% in Germany. Fathers are generally less likely to work part-time than non-fathers.

On average, women more frequently hold white-collar jobs than men, the difference rising to 26 percentage points in Estonia and 28 points in Slovakia. One country shows the inverse, Cyprus, but the difference is very small (64% male and 62% female white-collars). Being in a white-collar occupation does not seem to be linked with parenthood as the proportions of mothers and non-mothers and of fathers and non-fathers in white-collar occupations are very similar. There are a few exceptions to this general finding. A more than 10 percentage point gap in favour of non-mothers' presence in white-collar occupations exists in Hungary, France, Spain, Italy, Luxembourg, Portugal, Slovenia and particularly, Greece (27 percentage point gap). The proportion of non-fathers in white-collar jobs exceeds that of fathers by more than 10 percentage points in Germany, Hungary, Italy and particularly, the Netherlands (18 percentage point gap).

There are just three countries where agriculture employs as high a share as 5% of male workers, Iceland, Lithuania and Slovakia (more fathers than men without children in the household). The highest shares of women (mostly mothers) in agriculture are observed in Estonia and Italy, 3% and 4% respectively. The bulk of men are employed in the combined sector of mining and quarrying, manufacture and electricity, gas and water supply in most countries[8]. Moreover, in most countries, fathers outnumber non-fathers in this sector.

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[8] In the EU-SILC data base, some of the original NACE Rev. 1.1 sectors of activity were grouped together : sections A (agriculture, hunting and forestry) and B (fishing) ; sections C (mining and quarrying), D (manufacturing) and E (electricity, gas and water supply) ; and, sections O (other community, social and personal service activities), P (private households with employed persons), and Q (extra-territorial organisations and bodies). In particular the second regrouping is unfortunate as electricity, gas and water supply has been shown to be the sector that pays the highest relative wages whereas in the manufacturing business wages are generally below average. As a result, belonging to the combined sector does not allow for straightforward wage consequences to be drawn.

However, in Cyprus, slightly less than one fifth of men (28% of fathers and 19% of non-fathers) are in construction, slightly less than one fifth in wholesale and retail trade, repair of motor vehicles, motorcycles and personal and household goods (20% of fathers and 18% of non-fathers) and just 14% in mining and quarrying, manufacture and electricity, gas and water supply (and 13% in public administration, defense and compulsory social security). In Denmark, roughly one quarter of men are in the latter sector but just below one fifth is in the trade and repair branch. A similar share of around 20% of Greek men (mostly men without children) is to be found in these two sectors of activity (mining and quarrying, manufacture and electricity, gas and water supply on the one hand and wholesale and retail trade, repair of motor vehicles, motorcycles and personal and household goods on the other). In Iceland, the share of men in wholesale and retail trade, repair of motor vehicles, motorcycles and personal and household goods and that in real estate, renting and business activities is larger than that in mining and quarrying, manufacture and electricity, gas and water supply. In Luxembourg the bulk of men are in construction (where no divide is observed between fathers and non-fathers) and financial intermediation (predominantly non-fathers).

Sizeable shares of men (more than 15%) work in construction in five other countries, Ireland, Estonia, Lithuania, Cyprus, and Portugal, mostly non-fathers in the former two and fathers in the latter three. Male shares of above 15% are also found in wholesale and retail trade, repair of motor vehicles, motorcycles and personal and household goods in five countries, Sweden, Iceland, Cyprus, Denmark, and Greece, in public administration, defence and compulsory social security in Greece (predominantly fathers), in real estate, renting and business activities in Finland, Iceland and the Netherlands and in financial intermediation in Luxembourg.

There are just three countries where less than one tenth of female workers are in health and social work, Cyprus, Estonia and Spain. This sector particularly hosts mothers in Ireland and Belgium where the share of mothers in health and social work is higher by respectively 15 and 9 percentage points as compared with the share of non-mothers in this sector.

Only in Austria, Germany and Luxembourg is the proportion of women in education lower than 10%. In eleven countries mothers outnumber non-mothers in this sector whereas in seven countries the inverse holds true. Both are equally present in education in Belgium and Cyprus. Note that as high a share as 23% of Lithuanian mothers are employed in the education sector. Health and social work and education are thus two very important host sectors for women's labour supply.

The same can be said for manufacture and wholesale and retail trade. In a clear majority of the countries examined (there are just four exceptions), more than one tenth of women workers are employed in manufacture. In ten countries, more mothers than non-mothers are in manufacturing, with a particularly sizable gap in Hungary (a 7 percentage point gap), Slovenia (a 9 point gap), and especially the Netherlands (a 25 point gap). In nine countries,

the inverse holds true. The wholesale and retail business employs more than one tenth of women in all the countries. It particularly hosts mothers in Austria, Cyprus, Germany, Luxembourg and the UK and fathers in Cyprus, Spain, and France.

Public administration employs sizeable shares (above 15%) of women in just two countries, France and Slovakia, but their share is above 10% in eight more countries. Mothers outnumber non-mothers in eleven countries.

Women are particularly well represented in other community, social and personal service activities in Austria (mostly non-mothers), Spain (mostly mothers), and Luxembourg (mostly mothers).

Only in seven countries are more than 5% of women (less mothers than non-mothers) working in the hotel and restaurant branch (Austria, Cyprus, Finland, Spain, Greece, Portugal and Ireland).

Countries with particularly sizeable proportions of the workforce under temporary contracts are the four southern European countries and Poland. In a clear majority of the countries, women are more likely to be working under temporary employment contracts than men, with a difference as high as 8 percentage points in Spain and Greece. On the contrary, in Finland, Lithuania and Poland, there are more male than female temporary workers. Mothers are more likely to be temporarily employed than non-mothers in just two countries (Austria and Greece) and fathers are always more numerous to hold permanent employment contracts than non-fathers.

Finally, firm size is used only in the wage equations for men and women that serve to compute the gender wage gap. It was not included in the wage equations comparing mothers, non-mothers, fathers and non-fathers because of too many missing values for this variable so that including it would have excessively reduced sample sizes. Men are employed in slightly bigger firms than women in thirteen countries but the difference is extremely small. In the other countries, there is no gender dimension whatsoever to firm size.

More detailed descriptive statistics on all variables used in the present analysis and for all the EU member states studied are presented in Appendix Table 5.

Wage equations and decomposition results

All twenty-four countries studied put forth a sizeable raw gender wage gap (cfr. Figure 1 and Appendix Table 1). In other words, women suffer a wage disadvantage compared with men all over Europe. This raw gap varies between 10.63% of an average woman's wage in Belgium and 49.65% in Sweden.

Amongst the best performing countries we find Poland and Italy. Countries where the gender wage gap is very huge include Sweden and Estonia where the raw gender wage gap exceeds 45% (48% in Estonia and 50% in Sweden). In a further eight countries the gap is comprised between 25% and 39% (Denmark, Portugal, Cyprus, the UK, Slovakia, Austria, Germany, and the Czech Republic).

Correcting the selectivity bias increases the raw gender wage gap in ten of the twenty-four countries studied, it decreases it in eleven countries and it hardly changes anything in three countries.

In the first group the "offered wage gap" thus exceeds the observed wage gap. This group includes Estonia (selectivity bias correction increases the raw gap by 11 percentage points), Slovenia (+12 percentage points), Hungary (+15 points), Greece (+16 points), Belgium (+17 points), the UK (+19 points), Cyprus (+27 points), Denmark (+29 points), France (+40 points) and Spain (+58 points). In nine of these ten countries the sign of the estimated coefficient to the inverse Mills' ratio was negative in the wage equations for men. For women, its sign was negative in just six countries. Recall that when the coefficient of the inverse Mills' ratio is negative there are unobserved variables that increase the probability of selection (labour market participation) but also the probability of a lower than average score on the dependent variable (the logged hourly gross wage). On the contrary, when the coefficient of the inverse Mills' ratio is positive there are unobserved variables that increase both the probability of participation and that of a higher than average wage.

In a second group of eleven countries, the selectivity-adjusted wage gap is smaller than the raw gender wage gap. This is the case in Austria (selectivity bias correction decreases the raw gap by 9 percentage points), Portugal (-13 points), Sweden (-14 points), Germany (-18 points), Finland (-18 points), the Netherlands (-21 points), Slovakia (-25 points), Luxembourg (-34 points), Ireland (-52 points), Iceland (-53 points), and Lithuania (-86 points). In ten of these eleven countries, the estimated coefficient of the inverse Mills' ratio was negative for women indicating towards the existence of unobservables that make labour market participation more likely whilst at the same time increasing the probability that a lower than average wage will be perceived. For men, a negative sign is observed in six countries and a positive one in five countries.

Finally, in Poland, Italy and the Czech Republic, the correction process hardly affects the raw gender wage gaps. There does not seem to be any selectivity bias at play in these countries.

The selectivity-adjusted gender wage gaps were then decomposed using the Oaxaca and Ransom (1994) method in a part that can be attributed to differences in observable characteristics between women and men (such as marital status, level of education, experience, occupational status, sector of economic activity, contract type, firm size, and so forth) and a part that is due to different returns to identical characteristics or to unobserved heterogeneity. This second part is often referred to as the price, remuneration, or

discrimination effect. The twenty-four countries studied show great variety in the size of this price effect. Moreover, our estimates do not indicate any correlation between the size of the raw gender wage gap and that of the price effect. For example, whereas we included Germany amongst those countries where the raw gap is rather large, the price effect is smallest in this country (28%). In other words, more than two thirds of the raw wage difference observed between male and female workers in Germany can be explained by differences in observable characteristics between both groups. Indeed, our descriptive statistics show that although men and women have very similar levels of education, labour market experience, and age, women are much more often working part-time than men (58% versus 4% of men) and are more likely to hold a temporary employment contract (8% versus 4% of men). Men work in slightly larger firms and are much more frequently in responsibility positions that require them to supervise the work of co-workers (48% of men versus 27% of women). In terms of horizontal segregation, there are also some substantial gender differences on the German labour market, with considerably more women than men in less remunerative industries such as trade, but especially health and social work (17% of women compared with 5% of men). Although comparatively speaking the price effect is smallest in Germany, it remains large at 28%. At the other end of the spectre we find countries such as Hungary, Luxembourg, Slovakia, Slovenia, Poland, Ireland, Iceland, and Lithuania, where the endowment effect is negative so that we must conclude that in these countries women are making up by their better characteristics as compared with men. In other words, even the selectivity-adjusted wage gap underestimates the real wage gap as it is smaller than the price effect. In those countries, either pure discrimination in the form of a different return according to sex to identical characteristics or unobserved heterogeneity explain the entire "offered" gender pay gap. As regards the remaining countries, the price effect is smallest in Finland (35%) but extremely large in Austria (92%), Estonia (95%) and Portugal (97%).
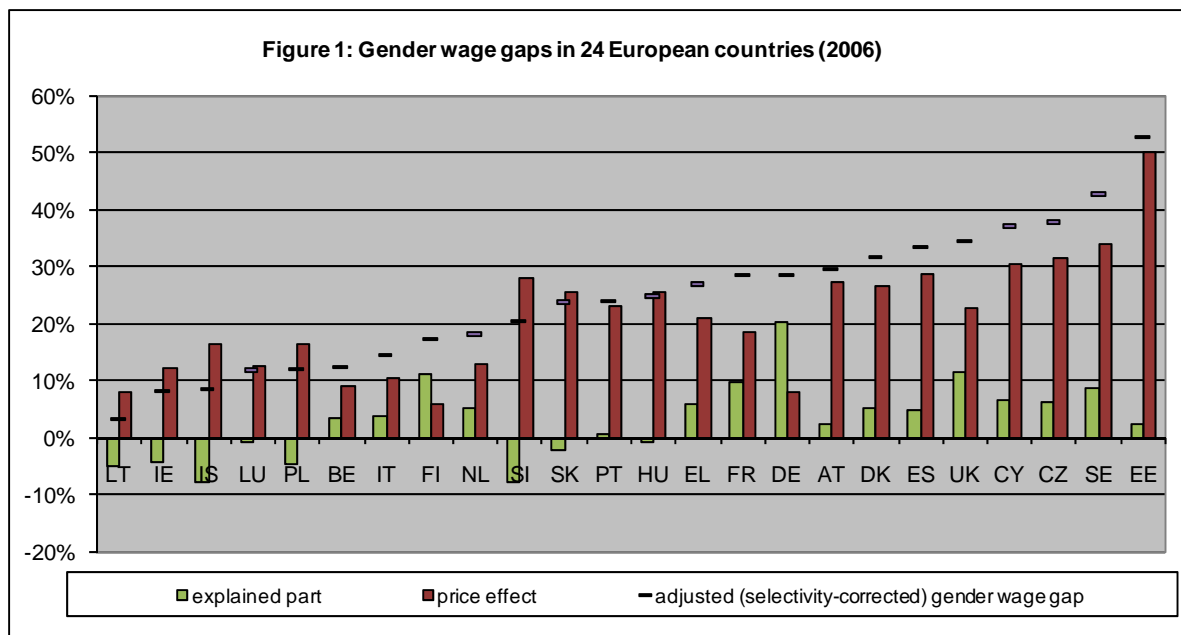
Figure 1: Gender wage gaps in 24 European countries (2006)

Legend: □ explained part ■ price effect − adjusted (selectivity-corrected) gender wage gap

<u>Notes</u>: (i) Only partnered men and women are considered; only full-time or part-time workers (employees but also self-employed and family workers). (ii) For IT, PT, and EL, the hourly gross wage measure is based on the variable "gross monthly earnings for employees" (wages for the current period); for the others, the variable "employee cash or near cash income" (wages for the reference period) was used.

Note that it is difficult to compare our country ranking with other studies since usually men are taken as the reference. Indeed, the unadjusted gender pay gap is usually computed as the difference between the average hourly gross earnings of male paid employees and of female paid employees as a percentage of average hourly gross earnings of male paid employees. This is the methodology applied by Eurostat but also in overview reports such as the 2006 gender pay gap report by the EU expert group on Gender, Social Inclusion and Employment (Plantenga and Remery 2006). In this paper we have deliberately chosen to put women's hourly gross wage in the denominator for the following reason. When the gender pay gap is computed as the difference between men's and women's hourly gross wage as a percentage of men's average hourly gross wage, the gender pay gap indicates by how many percentage points the earnings of men have to decrease in order to be equal to those of women. From a policy point of view, this definition is completely unrealistic. The aim is not to decrease men's wages to the level of women's but rather to increase women's wages to the level of men's. We therefore believe it is more correct to use the earnings of women as the reference point. In that case, the gender pay gap indicates by how many percentage points the earnings of women have to increase in order to be equal to those of men.

Be that as it may, even if wage gap definitions, country coverage and the age group considered (here 20-49 years of age but in other studies often either 15-64, 25-64 or 25-54 years of age) are different, our ranking of countries according to the size of the raw gender wage gap (before correcting the selectivity bias) is in line with other studies, a few exceptions aside (compared with Plantenga and Remery (2006), our results seem to

overestimate the gap in Estonia, Sweden, and the Czech Republic, and to a lesser extent also in Germany, Portugal, Hungary and Austria, and underestimate it in Belgium and Ireland). Comparing merely our French results with those of Meurs and Ponthieux (2006) that are based on data from the 2002 employment survey by the INSEE (Institut National de la Statistique et des Etudes Economiques), we see that compared with their 25% gender wage gap we find a 20% gap; the difference between both results is almost certainly due to the fact that we use women's wage in the denominator and Meurs and Ponthieux (2006) men's. They find 32% of this gap to be due to differences in observed characteristics between men and women and 68% to differences in the returns to identical characteristics. In turn, we find an endowment effect of 34% and a price effect of 66%. Based on the European Structure of Earnings Survey (which fails to cover the entire public sector), the Belgian gender wage gap for part-time and full-time workers was estimated at 10% in 2006, decomposed into a 54% price effect and a 46% endowment effect (Institut pour l'Egalité des Femmes et des Hommes 2009). In this study, it is estimated at 11% of which 72% is due to a price effect and 28% to an endowment effect. The fact that the endowment effect is somewhat smaller in the present analysis can be explained by the data used. Indeed, compared with the ESES, occupational and sectoral affiliation is identified in less detail in the EU-SILC. These few examples illustrate that our results are very much in line with other studies.

From this first analysis we thus conclude that depending on the country analysed, women suffer negative wage effects because they have characteristics (observed or unobserved) that are associated with a lower earning potential or because they are outright discriminated against by employers or the overall organisation of the labour market. Could this have something to do with the fact that most women are or will soon become mothers? In a second stage, we thus analysed the wage gap between mothers and non-mothers (Cfr. Figure 2 and Appendix Table 2). How does this gap compare with the observed gender wage gap?

A first finding is that the raw motherhood wage gap tends to be much smaller than the raw gender wage gap, indicating that discrimination is more sex- than maternity-related and thus concerns all women as they are all potential mothers.
Not only is the motherhood gap smaller in size, it is even negative in six of the twenty countries pointing towards a wage bonus for mothers as compared with non-mothers. Indeed, we find this to be the case in Slovenia, Ireland, Germany, Slovakia, Belgium and Cyprus. In the former three countries this bonus is below 2% of the average mother's wage. In the latter three it is somewhat more sizable, at 4% in Slovakia, 7% in Belgium and 18% in Cyprus. Focusing on these countries, where the raw motherhood wage gap exceeds 2%, we observe that differences in observed characteristics between mothers and non-mothers explain the entire raw wage gap in Belgium (the price effect is zero) and roughly half of it in

Cyprus and Slovakia (note however that the decomposition results fail to be statistically significant for Slovakia). Our descriptive statistics only help us explain this to some extent. Indeed, whereas in Belgium, mothers have lower educational attainments than non-mothers and are more likely to hold part-time jobs, they are on average 10 years older than the non-mothers in our sample (46 years of age as compared with 36 for non-mothers). As age and wage are generally positively correlated this could explain the observed raw wage bonus of mothers to a large extent. Whereas horizontal segregation does indeed exist in Belgium with more mothers than non-mothers in low-paid sectors such as health and social work, it also holds true that mothers are more likely to be active in public administration which could explain at least part of their wage advantage. Finally, whereas 77% of mothers are married, only 52% of non-mothers are. In Cyprus, the same differences between mothers and non-mothers are set forth by our descriptive statistics. Mothers are on average 11 years older than non-mothers (45 versus 34 years of age) and are more likely to be married (88% of mothers versus 68% of non-mothers) but they hold less human capital. The difference in part-time employment probability is much smaller in Cyprus than in Belgium: 7% of mothers and 6% of non-mothers hold part-time jobs. Horizontal segregation usually operates to the disadvantage of mothers, with more mothers than non-mothers in trade, in the hotel and restaurant branch, and in health and social work (although the difference in proportions of mothers and non-mothers is much weaker than in Belgium). However, mothers are far less present than non-mothers in one of the lowest paid sectors, notably that of other community, social and personal service activities (3% of mothers compared with 14% of non-mothers).

In thirteen of the twenty countries studied, results are in line with our expectations. A wage penalty associated with motherhood is indeed observed in these countries. In other words, women's wages suffer downward pressure from the accumulated effects of their sex and motherhood status. There is one country where mothers and non-mothers earn roughly identical wages, Italy. Across the 13 remaining countries, the wage disadvantage for mothers ranges between 1% in Hungary and 21% in the UK. In the UK, women without children in the household thus earn one fifth more than mothers. In Hungary, Poland, the Czech Republic and France, the wage penalty for mothers is quite small, below 5%. On the contrary, in the Netherlands, Spain, Estonia, Luxembourg and, as already said, the UK, it exceeds 10% of an average mother's wage.

The decomposition results are far less statistically significant than in the case of the gender wage gap. Indeed, a statistically significant price effect was found only for Germany, Poland, Portugal, Spain, and the UK, and a statistically significant endowment effect only for eight countries (Cyprus, Belgium, Germany, the Czech Republic, France, the Netherlands, Estonia, and the UK). In those countries where the price effect is significant, it is roughly of the same size as in the case of the gender wage gap, with the exception of Germany. In Germany,

28% of the adjusted gender wage gap could not be attributed to observed differences between the characteristics of men and women whereas the entire wage gap between mothers and non-mothers can be explained by differences in their characteristics. However, recall that this latter gap is rather small at 2% in Germany. In the UK, Spain, Portugal and Poland the price effect is very large as it was the case for the gender wage gap in these countries (respectively 70%, 79%, 95% and 100%).

Moreover, the figures show no correlation between the size of the raw motherhood wage gap and the price effect. Stronger even, as the motherhood wage gap increases, the size of the price effect decreases. Consequently, in the UK where the observed wage difference between mothers and non-mothers is largest (21%), the price effect is smallest, although it remains sizable at 70%.

In the Czech Republic the entire wage differential between mothers and non-mothers derives from differences in their respective endowments but the total penalty is rather small at 2%. The UK, the Netherlands, and Estonia, three countries with a motherhood gap above 10%, are the only ones where the decomposition results point towards a considerable role played by differences in endowments to explain the observed wage differential. In these countries, the endowment effect explains respectively 30%, 57% and 83% of the observed wage gap. In Estonia, given that mothers and non-mothers have similar levels of education, human capital differences play no role in explaining the observed wage penalty for mothers. Segregation does, both vertical (with less white-collar mothers than non-mothers) and horizontal (with more mothers than non-mothers in health and social work, agriculture and manufacture and less in more remunerative sectors of activity such as transportation, financial intermediation, real estate, etc.). In the Netherlands, besides segregation (although to a lesser extent than in the Estonian case), human capital does play a role. Indeed, the observed wage penalty for mothers should at least partly be attributed to their lower level of education (41% of mothers compared with 14% of non-mothers have a lower secondary degree at most). Mothers are also more likely to be in part-time work (66% of mothers compared with 52% of non-mothers). Nevertheless, segregation explains a substantial part of the wage gap as well, with less mothers in white-collar occupations (72% versus 79% of non-mothers) but also with a strong concentration of mothers in the manufacturing business (this sector has been shown to pay lower than average wages, cfr. Genre et al. 2009). Finally, the UK case is pretty similar to the Dutch one. Mothers are less well educated (19% have a degree in lower secondary education at most, compared with just 8% of non-mothers), they are underrepresented in white-collar jobs, and they outnumber non-mothers in the least well-paid industries (trade, hotel and restaurant business, health and social work, ...) whereas they are outnumbered in the more highly remunerative sectors (transport and communication, financial intermediation, real estate, ...).

The country ranking changes completely between the analysis of the adjusted gender wage gap and that of the motherhood gap. Our results allow to distinguish three groups of countries.

First, there are those countries that combine a sizable adjusted gender wage gap with a very small or negative wage gap between mothers and non-mothers. This is the case in thirteen of the twenty countries studied (Cyprus, Ireland, Slovakia, Germany, Belgium, Slovenia, Poland, Italy, Hungary, France, the Czech Republic and, to a lesser extent, Portugal and Greece). For these countries, we can therefore conclude that wage discrimination is sex-related rather than a consequence of being a mother.

Secondly, there are two countries where the motherhood gap is even larger than the selectivity-adjusted gender wage gap, notably Lithuania and Luxembourg. In these countries, more so than being a woman, it is being a mother that depresses women's wages. Women thus accumulate two very pronounced negative effects on their relative wages.

Finally, in the remaining five countries, although the motherhood gap is smaller than the gender wage gap, it remains large (between 9% and 21% of an average mother's wage). For these countries we can thus say that it is more their sex than their status as mothers that holds women's wages back but both characteristics have a substantial negative effect.
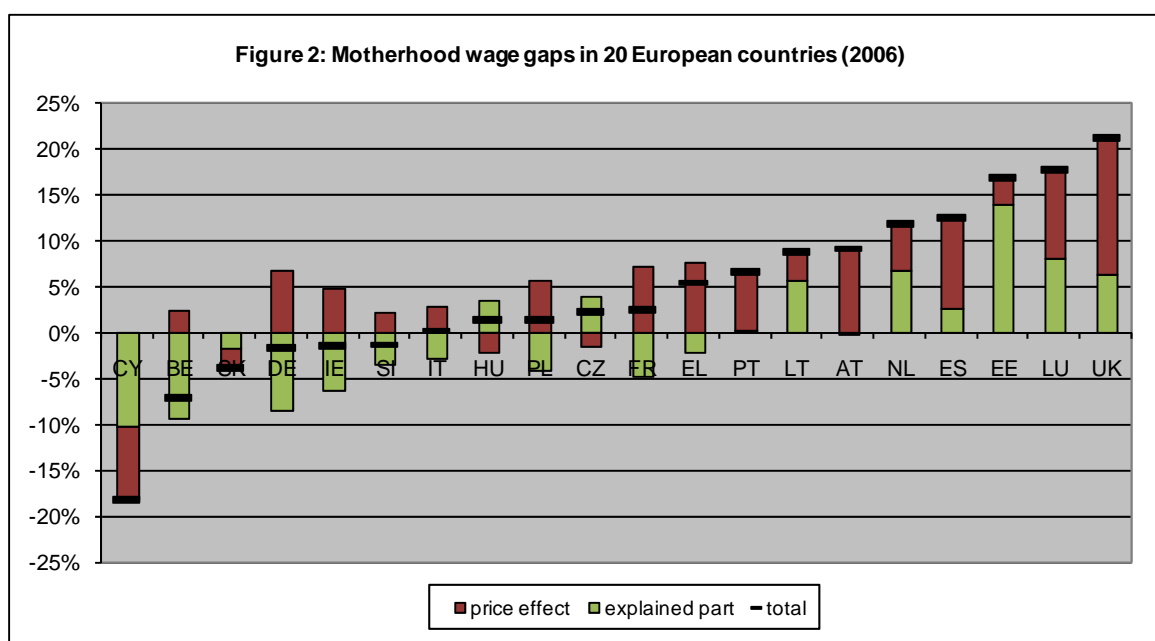
Figure 2: Motherhood wage gaps in 20 European countries (2006)

Notes: (i) Only partnered men and women are considered; only full-time or part-time workers (employees but also self-employed and family workers). (ii) For IT, PT, and EL, the hourly gross wage measure is based on the variable "gross monthly earnings for employees" (wages for the current period); for the others, the variable "employee cash or near cash income" (wages for the reference period) was used.

From this section we conclude that motherhood reinforces the gender wage gap in all countries but Cyprus, Belgium, Slovakia, Germany, Ireland and Slovenia. Moreover, discrimination seems to be sex- rather than maternity-related in thirteen of the countries so that it concerns all women as actual or potential mothers. The inverse holds true in Lithuania

and Luxembourg. Finally, in the five remaining countries, mothers' wages undergo strong downward pressure both because of their sex and their motherhood.

In a next step we have computed the wage gap between fathers and non-fathers (Cfr. Figure 3 and Appendix Table 3). Our results put forth the reverse scenario of the motherhood wage gap. Indeed, only in four countries is there a penalty associated with fatherhood whereas in fifteen countries, fathers have a substantial wage advantage as compared with men without children in their households. In the UK, fathers and non-fathers appear to earn a roughly identical wage. The wage bonus for fathers varies between 2% of an average father's wage in the Czech Republic and 20% in Ireland. The fatherhood-associated wage penalty that is observed in four countries is extremely small in three of them (1% in Lithuania and Estonia and 2% in Hungary) but it amounts to 10% of an average father's wage in Luxembourg.

A statistically significant price effect is found only in 2 countries, Estonia and Luxembourg, both countries where fathers suffer a wage penalty as compared with non-fathers. In Estonia, the price effect is zero (and consequently the endowment effect is total) but the raw fatherhood wage gap is so small that decomposing it probably does not make much sense. In Luxembourg, the endowment effect is negative meaning that fathers are making up by their better characteristics as compared with men without children in the household. In other words, the raw fatherhood wage gap underestimates the real wage gap as it is smaller than the price effect.

A statistically significant endowment effect is found in all (fourteen) of the wage bonus countries, except for the Czech Republic. It is total in six of these countries, above 90% in Poland, above 80% in the Netherlands, Slovakia, Slovenia, above 70% in Spain and Austria, above 60% in France and above 50% in Ireland. In all of these countries, our descriptive statistics do indeed show that fathers are at least 9 years older than non-fathers, that they are less likely to be in part-time employment and less frequently work under a temporary employment contract. Human capital differences cannot explain the observed wage bonus for fathers as in most countries they are less well educated than non-fathers. Exceptions are Germany and Slovenia where fathers are less likely than non-fathers to hold at most a degree in lower secondary education. On the contrary, horizontal segregation does play an important role. Although it is impossible to go into each country's specificities, it generally holds true that fathers are better represented in industries paying above-average wages (transport, storage and communication, public administration, defense and compulsory social security, ...) and worse represented in those industries that pay below-average wages (hotel and restaurant branch, wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods, ...).

Figure 3: Fatherhood wage gaps in 20 European countries (2006)

Legend: ■ price effect ■ explained part ▬ total

Comparing these results with the wage differences between mothers and non-mothers, different groups of countries are revealed. First, there are nine countries where the wage bonus for fathers is amongst the largest and the wage penalty for mothers amongst the lowest (or where there is even a wage bonus for mothers as well). These countries are Ireland, France, Germany, Belgium, Slovenia, Poland, Cyprus, Slovakia, and Italy. Second, there are three countries where the reverse scenario is observed, a very large wage penalty for mothers but roughly equal pay for fathers and non-fathers. This is the case in the UK, Lithuania and Estonia. Third, there are countries where gender differences are exacerbated in that they combine a very large wage bonus for fathers with a huge wage penalty for mothers. This group includes Spain, Austria, the Netherlands, Greece, Portugal and to a much lesser extent, the Czech Republic. Finally, in Luxembourg, regardless of their sex, all parents perceive substantially lower wages than non-parents. In other words, the wage penalty is huge for both mothers (as compared with non-mothers) and fathers (as compared with non-fathers).

Finally, we have computed the wage gap between mothers and fathers (Cfr. Figure 4 and Appendix Table 4). Our aim is to show that the size of this gap is larger than that of the gender wage gap because of the fact that motherhood status generally worsens women's wages whereas being a father tends to have a positive impact on men's wages. Note that it is not a straightforward procedure to test this hypothesis as final outcomes are largely influenced by the respective proportions of mothers, fathers, men and women.

Nevertheless, our analysis confirms our expectations in fifteen countries. In these countries, parenthood worsens the gender wage gap. In two countries, parenthood does not change the adjusted gender wage gap; both gaps are of equal size. This is the case of Italy and Slovenia. Finally, in Hungary, Cyprus, and the Czech Republic, the gap between mothers and fathers is smaller than that between women and men in general.

The raw wage gap between mothers and fathers varies between 6% in Hungary and 55% in Estonia. In Estonia, but also in the Netherlands and Austria, fathers thus earn at least 50% more than mothers. The size of the price effect is generally very large (and statistically significant in fifteen countries), between 61% in the Netherlands and a 100% in Hungary, Lithuania, Poland, Slovakia, Portugal, the Czech Republic, the UK, and Austria. The endowment effect is statistically significant in just five countries (Luxembourg, Portugal, France, Germany, and the Netherlands) and it varies between 0% in Portugal and 100% in Luxembourg (26% in Germany, 30% in France and 39% in the Netherlands). A consultation of our descriptive statistics does indeed show that fathers are better educated than mothers, except for Luxembourg. The major difference lies in the proportions of mothers and fathers working part-time. Whereas only very few fathers hold part-time jobs, 26% of French mothers, 53% of mothers in Luxembourg, 54% of German mothers and 66% of Dutch mothers work part-time. Although there are more mothers than fathers amongst white-collar workers, mothers are substantially more present in the least well-paid industries of health and social work and other community, social and personal services. Finally, fathers are far less likely to hold temporary employment contracts.
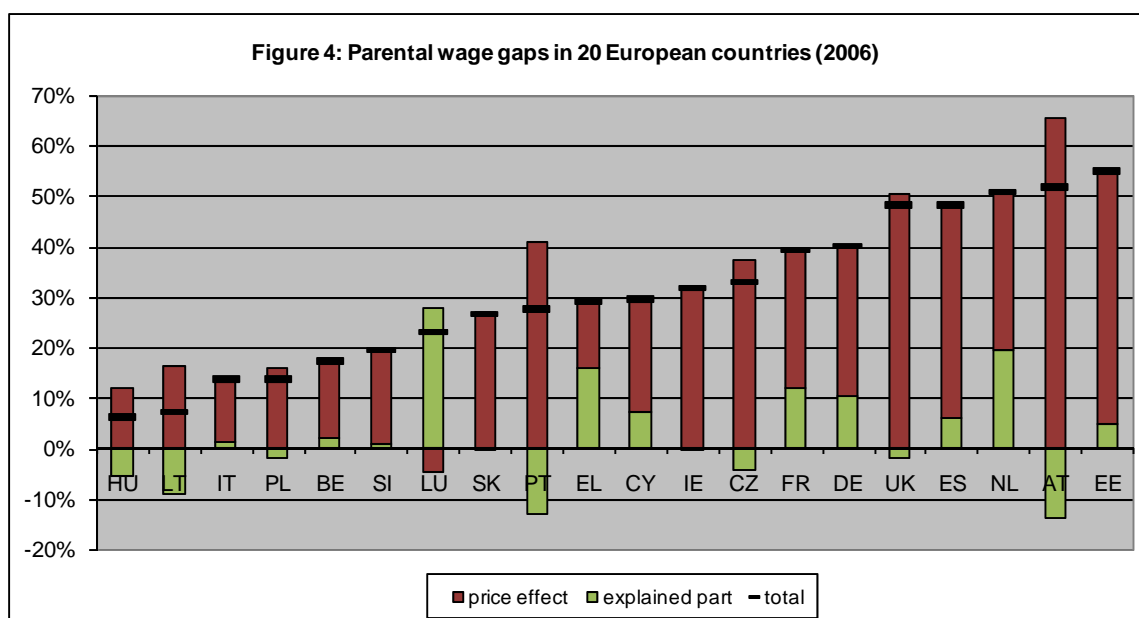
Figure 4: Parental wage gaps in 20 European countries (2006)

From this analysis, it is thus clear that parenthood causes women's wages to drop and men's wages to increase so that when comparing mothers and fathers we find wage gaps that are even deeper than those observed between the total populations of women and men.

Conclusion

According to the country considered, women's wages suffer downward pressure either by the fact that compared with men they have characteristics (observed or unobserved) that are associated with a lower earning potential, or by pure discriminatory practices applied by employers or embedded in overall labour market regulations that play to their disadvantage.

Is this finding related to the fact that women are or will soon be mothers? A first finding is that the raw motherhood wage gap tends to be much smaller than the selectivity-adjusted gender wage gap, indicating that discrimination is more sex- than maternity-related and thus concerns all women as they are all potential mothers. Not only is the motherhood gap smaller in size, it is even negative in six of the twenty countries studied pointing towards a wage bonus for mothers as compared with non-mothers. However, only in Belgium and Cyprus is this bonus worth mentioning (7% in Belgium and 18% in Cyprus). In the thirteen of the remaining countries, motherhood strengthens the gender wage gap and women's wages suffer downward pressure from the accumulated effects of their sex and motherhood status. The wage disadvantage for mothers (as compared with non-mothers) ranges from 1% of an average mother's wage in Hungary to 21% in the UK. There is one country where mothers and non-mothers earn roughly identical wages, Italy.

The wage gaps we computed between fathers and non-fathers put forth the reverse scenario of the motherhood wage gap. Indeed, only in four countries is there a penalty associated with fatherhood whereas in fifteen countries, fathers have a substantial wage advantage as compared with men without children in their households. The wage bonus for fathers varies between 2% of an average father's wage in the Czech Republic and 20% in Ireland. In the UK, fathers and non-fathers appear to earn an identical wage.

A comparison of the results for mothers and fathers shows that nine countries combine huge wage bonuses for fathers with very weak wage penalties for mothers, three countries very heavily penalise mothers but pay roughly equal wages to fathers and non-fathers, and one country combines very large motherhood and fatherhood wage penalties. In the six remaining countries, gender differences are exacerbated by a combination of very large wage bonuses for fathers with huge wage penalties for mothers. This group includes Spain, Austria, the Netherlands, Greece, Portugal and to a much lesser extent, the Czech Republic.

The raw wage gap between mothers and fathers varies between 6% of an average mother's wage in Hungary and 55% in Estonia. If it is true that motherhood worsens female wages while fatherhood improves men's then we should find that the wage gap between mothers and fathers systematically deepens the gender wage gap. Such reasoning does indeed ignore the impact on final outcomes of the respective proportions of mothers, fathers, men and women. Nevertheless, our analysis confirms our expectations in fifteen countries. In these countries, parenthood worsens the gender wage gap. In two countries, parenthood does not change the adjusted gender wage gap; both gaps are of equal size. This is the case of Italy and Slovenia. Finally, in Hungary, Cyprus, and the Czech Republic, the gap between mothers and fathers is smaller than that between women and men in general.

Despite long standing legislation on equal pay, women in Europe thus still earn less than men. Differences in human capital no longer play a major role in the persistence of the gender pay gap. The gender pay gap is more related to the level of occupational segregation, the impact of the wage structure but also to various kinds of overt or covert discriminatory practices. On top of their sex women's wages generally suffer from their motherhood status. Whereas women can hardly change their sex, they have a lot more say in their fertility plans. Indeed, less complicated than changing sex is deciding to have no or fewer children in order to avoid at least one of the two penalties women accumulate on their wage. Such a trend is indeed to be observed throughout Europe today: women postpone childbearing or refrain from it altogether. Nevertheless, to quote Plantenga and Remery (2006): "*Women seem to be swimming upstream: women with an improved educational background, fewer children and shorter periods of employment interruption are confronted with a labour market with growing wage differentials and a reduced share of collectively agreed wages and wage components*."

Policy responses are generally threefold: 1) equal pay policies; 2) equal opportunities policies; and 3) wage policies.
As regards the first type of policies, note that the legal framework is generally not the problem, its effective enforcement is. It also remains to be seen whether soft policy initiatives such as the yearly organisation of an Equal Pay Day in a number of countries will be sufficient to eliminate the persisting pay gap between women and men. This rather appears to be wishful thinking.
Childcare, as part of equal opportunities policy, is an important arrangement to enable women to have more continuous employment patterns. Yet the availability and affordability varies extensively across Europe. Moreover, this paper shows that discrimination operates along gender lines rather than according to parenthood status in most countries so that it is the disadvantage derived from sex more so than that associated with maternity that requires special policy attention.

Over the past decade most member states have evolved towards decentralisation and fragmentation of the wage-setting process and towards a reduction of the minimum wage. This trend works against policies to tackle the gender pay gap. Moreover, what works well in one country will not necessarily be appropriate in another. Policies should thus account for national particularities.

What is more worrisome than the absence or the negative side-effects of various policies to tackle the gender wage gap is the general disinterest in the issue: "*In several European countries the gender pay gap has a low profile both in the public debate and in the policy agenda. Summarising, one of the main problems is that there is no real owner of the problem, as nobody really feels responsible for closing the gender pay gap. Organising political support for closing the gap seems to be an important challenge for the near future.*" (Plantenga and Remery 2006) This disinterest is not confined to national contexts. Indeed, the same seems to be happening at the level of the European Union. With the revision of the European Employment Strategy in 2005, tackling the gender pay gap is no longer a separate target but it is included in two general guidelines for which no explicit timeframe is fixed.

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Appendices

Appendix Table 1. Gender wage gaps in 24 European countries (2006)

	obs. men	obs. women	R² men	R² women	mean hourly gross wage men (euros)	mean hourly gross wage women (euros)	raw gender wage gap	adjusted (selectivity-corrected) gender wage gap	Oaxaca decomposition explained part	Oaxaca decomposition price effect
LT	702	745	38,11	46,67	2,41	1,94	23,99%	3,25%	-146.22%	246,22%
IE	478	485	47,44	48,47	20,90	17,88	16,87%	8,02%	-52.11%	152,11%
IS	273	230	40,17	35,94	23,41	19,82	18,12%	8,56%	-91.15%*	191,15%
LU	740	717	69,06	67,15	20,64	17,50	17,97%	11,79%	-6.12%	106.12%**
PL	1661	1777	42,89	51,58	3,30	2,95	11,78%	11,96%	-38.22%**	138.22%***
BE	873	888	39,63	36,02	17,82	16,10	10,63%	12,44%	27.93%**	72.07%***
IT	1938	2217	43,35	47,91	11,66	10,13	15,04%	14,46%	26.15%**	73.85%***
FI	569	567	44,69	39,49	17,32	14,31	20,99%	17,22%	65.00%***	35,00%
NL	1150	1058	49,57	47,47	21,03	17,11	22,91%	18,20%	29.42%**	70.58%***
SI	680	822	45,55	43,86	7,61	6,44	18,16%	20,34%	-37.53%***	137.53%***
SK	905	1029	28,49	25,77	2,45	1,86	31,44%	23,73%	-8.22%	108.22%***
PT	602	679	57,60	70,63	5,29	4,15	27,38%	23,86%	2,55%	97.45%***
HU	814	876	39,43	48,70	3,15	2,59	21,63%	24,82%	-3.15%	103.15%***
GR	463	545	58,26	65,05	8,64	7,01	23,30%	26,92%	21.66%*	78.34%***
FR	1456	1471	42,49	27,46	14,05	11,68	20,27%	28,43%	34.44%***	65.56%***
DE	1572	1744	44,51	37,68	16,76	12,45	34,65%	28,46%	71.89%***	28,11%
AT	783	812	30,43	26,59	15,63	11,80	32,41%	29,65%	7,80%	92.20%***
DK	456	530	37,11	34,10	24,33	19,51	24,71%	31,76%	16.12%**	83.88%***
ES	1347	1337	48,37	53,60	10,47	8,63	21,28%	33,52%	14.48%*	85.52%***
UK	1288	1329	28,90	35,23	18,70	14,49	29,11%	34,54%	33.92%***	66.08%***
CY	652	686	52,20	66,58	10,72	8,36	28,22%	37,13%	17.71%**	82.29%***
CZ	939	1020	38,33	45,51	3,92	2,82	39,18%	37,80%	16.80%***	83.20%***
SE	543	604	33,97	20,60	15,32	10,24	49,65%	42,80%	20.57%**	79.43%**
EE	910	974	38,37	49,80	3,72	2,52	47,52%	52,75%	4,87%	95.13%***

<u>Note</u>: For LV no reliable measure of gross hourly wage can be computed. For CY and NO, there were too little observations (5 in each country)
<u>Note</u>: For countries in bold, the hourly gross wage measure is based on the variable "gross monthly earnings for employees"; for the others, the variable "employee cash or near cash income" was used.
<u>Note</u>: Couples and singles are considered; only employees are considered, not self-employed or family workers.

Appendix Table 2. Motherhood wage gaps in 20 European countries (2006)

	obs. women	obs. mothers	R² women	R² mothers	mean hourly gross wage women (euros)	mean hourly gross wage mothers (euros)	raw motherhood wage gap	Oaxaca decomposition explained part	Oaxaca decomposition price effect
CY	1002	208	71,39	68,12	6,84	8,35	-18.19%	55.98%**	44,02%
BE	1342	157	31,57	49,50	15,71	16,90	-7.01%	133.38%***	-33.38%
SK	1396	586	18,15	33,90	1,89	1,96	-3.74%	47,16%	52,84%
DE	2978	418	44,76	41,71	12,27	12,46	-1.54%	547.58%***	-447.58%**
IE	1108	89	46,30	57,43	15,69	15,90	-1.36%	457,18%	-357.18%
SI	1023	401	34,76	54,78	6,42	6,50	-1.28%	277,06%	-177.06%
IT	4721	513	42,21	53,85	9,51	9,49	0,22%	-1239.81%	1339,81%
HU	1418	408	39,77	49,90	2,64	2,60	1,43%	248,92%	-148.92%
PL	2810	763	51,65	55,35	2,83	2,79	1,47%	-286.03%	386.03%***
CZ	1398	415	43,50	53,12	2,84	2,78	2,31%	168.01%*	-68.01%
FR	2043	282	24,36	25,62	11,65	11,37	2,48%	-193.33%*	293,33%
GR	1092	128	57,83	75,25	6,52	6,18	5,45%	-39.54%	139,54%
PT	1154	207	65,66	74,25	4,22	3,95	6,73%	5,11%	94.89%*
LT	1013	303	44,63	57,93	1,89	2,07	8,88%	64,02%	35,98%
AT	1346	231	22,59	41,10	11,86	10,86	9,21%	-0.09%	100,09%
NL	2789	201	34,58	39,59	15,97	14,28	11,84%	57.22%**	42,78%
ES	2654	315	44,26	52,77	8,06	7,16	12,59%	21,47%	78.53%**
EE	1238	506	42,28	39,66	2,58	2,21	16,86%	82.79%***	17,21%
LU	1051	78	63,26	80,78	17,84	15,15	17,72%	45,92%	54,08%
UK	2384	182	35,17	50,53	14,41	11,88	21,31%	29.77%**	70.22%***

<u>Note</u>: For LV no reliable measure of gross hourly wage can be computed. For CY and NO, there were too little observations (5 in each country)
<u>Note</u>: For countries in bold, the hourly gross wage measure is based on the variable "gross monthly earnings for employees"; for the others, the variable "employee cash or near cash income" was used.
<u>Note</u>: Couples and singles are considered; only full-time and part-time workers (employees, but also self-employed or family workers)

Appendix Table 3. Fatherhood wage gaps in 20 European countries (2006)

					mean hourly gross wage non-fathers (euros)	mean hourly gross wage fathers (euros)		Oaxaca decomposition	
	obs. non-fathers	obs. fathers	R² non-fathers	R² fathers			raw fatherhood wage gap	explained part	price effect
IE	1198	68	43,16	67,86	16,86	20,96	-19.58%	56.35%**	43,65%
FR	2738	213	38,16	56,72	12,85	15,65	-17.92%	62.72%***	37,28%
ES	3878	291	37,05	57,07	8,86	10,62	-16.63%	73.19%***	26,81%
DE	3129	249	55,37	57,62	14,72	17,46	-15.69%	112.38%***	-12.38%
BE	1599	110	36,78	59,14	16,77	19,84	-15.47%	105.07%***	-5.07%
AT	1845	170	21,53	40,10	14,21	16,48	-13.75%	76.87%***	23,13%
NL	3386	142	31,50	48,24	18,26	20,85	-12.41%	80.51%***	19,49%
SI	1257	175	36,62	39,52	6,83	7,77	-12.14%	81.12%***	18,88%
PL	3517	491	40,61	41,83	2,82	3,18	-11.44%	91.07%***	8,93%
CY	1212	127	43,46	61,27	9,60	10,82	-11.34%	134.66%***	-34.66%
GR	1493	74	51,04	61,78	7,15	7,98	-10.49%	211.97%***	-111.97%
SK	1572	346	17,53	41,80	2,29	2,49	-7.92%	79.82%**	20,18%
IT	6080	362	39,68	50,03	10,03	10,82	-7.29%	172.32%***	-72.32%
PT	1282	148	55,23	62,79	4,68	5,05	-7.20%	127.06%**	-27.06%
CZ	2059	224	37,89	48,12	3,61	3,70	-2.30%	102,55%	-2.55%
UK	2358	103	34,21	43,20	17,67	17,62	0.31%	-1940.91%*	2040,91%
LT	1078	189	39,25	52,21	2,24	2,22	0.73%	-508.39%	608,39%
EE	1555	327	32,70	33,86	3,46	3,43	0.99%	1412.29%***	-1312.29%***
HU	1884	188	33,60	46,66	2,81	2,76	1.91%	-111.25%	211,25%
LU	1553	73	67,82	91,73	20,54	18,66	10.05%	-28.08%	128.08%**

Note: For LV no reliable measure of gross hourly wage can be computed. For CY and NO, there were too little observations (5 in each country)
Note: For countries in bold, the hourly gross wage measure is based on the variable "gross monthly earnings for employees"; for the others, the variable "employee cash or near cash income" was used.

Note: Couples and singles are considered; only full-time and part-time workers (employees, but also self-employed or family workers)

Appendix Table 4. Parenthood wage gaps in 20 European countries (2006)

					mean hourly gross wage fathers (euros)	mean hourly gross wage mothers (euros)		Oaxaca decomposition	
	obs. fathers	obs. mothers	R² fathers	R² mothers			raw parental wage gap	explained part	price effect
HU	188	408	46,66	49,90	2,76	2,60	6,25%	-88.83%	188.83%**
LT	189	303	52,21	57,93	2,22	2,07	7,26%	-126.34%	226.34%**
IT	362	513	50,03	53,85	10,82	9,49	13,95%	9,13%	90.87%*
PL	491	763	41,83	55,32	3,18	2,79	13,95%	-14.99%	114.99%**
BE	110	157	58,52	47,63	19,84	16,90	17,43%	11,66%	88,34%
SI	175	401	39,52	54,78	7,77	6,50	19,60%	3,55%	96.45%***
LU	73	78	91,73	80,78	18,66	15,15	23,17%	119.73%*	-19,73%
SK	346	586	41,82	32,74	2,49	1,96	26,62%	-0.64%	100.64%***
PT	148	207	62,79	74,25	5,05	3,95	27,64%	-47.82%*	147.82%***
GR	74	128	61,78	75,51	7,98	6,18	29,14%	54,51%	45,49%
CY	127	208	61,27	68,11	10,82	8,35	29,56%	24,63%	75,37%
IE	68	89	57,43	44,22	20,96	15,90	31,81%	-1.55%	101,55%
CZ	224	415	48,12	53,12	3,70	2,78	32,98%	-13.54%	113.54%***
FR	213	306	53,98	24,91	15,84	11,37	39,34%	29.98%*	70.02%***
DE	249	418	57,36	41,78	17,46	12,46	40,09%	25.83%***	74.17%***
UK	103	182	43,20	49,67	17,62	11,88	48,27%	-4.31%	104.31%***
ES	291	315	56,82	52,54	10,62	7,16	48,33%	12,00%	88.00%*
NL	142	201	93,15	73,14	22,91	15,20	50,75%	38.57%**	61.43%***
AT	170	231	37,17	38,27	16,48	10,86	51,80%	-26.59%	126.59%***
EE	327	506	33,86	39,66	3,43	2,21	54,99%	8,54%	91.46%***

Note: For LV no reliable measure of gross hourly wage can be computed. For CY and NO, there were too little observations (5 in each country)
Note: For countries in bold, the hourly gross wage measure is based on the variable "gross monthly earnings for employees"; for the others, the variable "employee cash or near cash income" was used.

Note: Couples and singles are considered; only full-time and part-time workers (employees, but also self-employed or family workers)

Appendix table 5a : Descriptive statistics : Austria, Belgium, Cyprus, the Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, Greece and Hungary

		AT	BE	CY	CZ	DE	DK	EE	ES	FI	FR	EL	HU
Gross hourly wage: (in EUR)	*men*	15,63	17,82	10,72	3,92	16,76	24,33	3,72	10,47	17,32	14,05	8,64	3,15
	women	11,80	16,10	8,36	2,82	12,45	19,51	2,52	8,63	14,31	11,68	7,01	2,59
including overtime payments and premiums for shift work, night work and/or weekend work, but excluding bonuses (i.e. irregular payments which do not occur during each pay period, such as a holiday allowance, a "thirteenth month", profit sharing, etc.).	*non-mothers*	11,86	15,71	6,84	2,84	12,27		2,58	8,06		11,65	6,52	2,64
	mothers	10,86	16,90	8,35	2,78	12,46		2,21	7,16		11,37	6,18	2,60
	non-fathers	15,22	17,59	10,40	3,89	16,88		3,68	9,87		13,75	8,14	3,08
	fathers	16,48	19,84	10,82	3,70	17,46		3,43	10,62		15,84	7,98	2,76
Wage gap: (in %) (men's wage - women's wage)/women's wage	*men/women*	29,65%	12,44%	37,13%	37,80%	28,46%	31,76%	52,75%	33,52%	17,22%	28,43%	26,92%	24,82%
(non-mothers' wage - mothers' wage)/mothers' wage	*mothers/non-mothers*	9,21%	-7.01%	-18.19%	2,31%	-1.54%		16,86%	12,59%		2,48%	5,45%	1,43%
(non-fathers' wage - fathers' wage)/fathers' wage	*fathers/non-fathers*	-13.75%	-15.47%	-11.34%	-2.30%	-15.69%		0,99%	-16.63%		-17.92%	-10.49%	1,91%
(fathers' wage - mothers'wage)/mothers' wage	*mothers/fathers*	51,80%	17,43%	29,56%	32,98%	40,09%		54,99%	48,33%		39,34%	29,14%	6,25%
Married: (in %) ref.="not legally married"	*men*	83,36%	72,00%	94,85%	84,36%	84,88%	70,89%	69,47%	83,97%	64,52%	65,44%	95,75%	79,43%
	women	85,17%	73,36%	96,57%	85,69%	86,22%	69,15%	71,54%	85,32%	61,01%	67,38%	96,64%	79,58%
	non-mothers	48,77%	52,06%	68,18%	55,75%	51,54%		38,70%	51,21%		49,49%	54,89%	46,81%
	mothers	86,10%	76,92%	87,56%	81,24%	79,86%		68,15%	85,32%		74,64%	86,66%	75,13%
	non-fathers	51,15%	49,17%	66,01%	49,76%	58,99%		40,29%	53,29%		49,19%	51,90%	49,70%
	fathers	88,52%	93,90%	97,82%	93,45%	93,59%		83,56%	94,85%		88,10%	100,00%	90,20%
education: (in %) **low** lower secondary at most	*men*	7,86%	11,54%	13,59%	2,70%	8,69%	16,72%	5,30%	33,10%	9,52%	8,81%	22,71%	8,85%
	women	17,32%	10,11%	7,56%	5,20%	9,75%	11,79%	3,81%	26,49%	6,84%	9,43%	22,16%	11,85%
	non-mothers	12,95%	9,30%	10,76%	4,65%	12,17%		6,28%	24,37%		8,61%	13,50%	7,79%
	mothers	28,60%	13,98%	21,30%	7,91%	12,47%		2,25%	50,61%		22,44%	43,69%	20,65%
	non-fathers	9,13%	14,36%	17,91%	3,06%	12,22%		11,83%	39,42%		8,41%	27,15%	11,52%
	fathers	10,10%	20,34%	28,19%	3,80%	8,15%		4,39%	53,96%		15,87%	38,95%	9,79%

Appendix table 5a : Descriptive statistics : Austria, Belgium, Cyprus, the Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, Greece and Hungary (continued)

		AT	BE	CY	CZ	DE	DK	EE	ES	FI	FR	EL	HU
medium upper secondary at most	men	64,87%	35,97%	45,82%	78,29%	55,06%	55,38%	58,60%	23,91%	46,76%	56,09%	38,85%	70,01%
	women	55,00%	32,30%	40,41%	76,36%	55,73%	50,19%	35,75%	24,22%	38,19%	48,67%	31,84%	57,13%
	non-mothers	52,14%	29,65%	37,85%	75,59%	49,82%		38,13%	24,78%		48,99%	35,89%	56,47%
	mothers	45,92%	46,23%	48,80%	78,83%	61,91%		43,14%	26,01%		57,31%	28,59%	55,66%
	non-fathers	62,22%	37,43%	43,65%	80,57%	50,49%		57,07%	24,71%		58,05%	42,52%	67,19%
	fathers	64,19%	40,28%	51,62%	85,04%	60,53%		67,13%	25,92%		69,10%	46,31%	77,66%
high post-secondary tertiary or non-tertiary education	men	27,27%	52,49%	40,58%	19,01%	36,25%	27,90%	36,10%	43,00%	43,72%	35,09%	38,44%	21,14%
	women	27,67%	57,60%	52,03%	18,44%	34,52%	38,02%	60,45%	49,28%	54,98%	41,89%	45,99%	31,02%
	non-mothers	34,91%	61,05%	51,40%	19,75%	38,01%		55,59%	50,86%		42,40%	50,61%	35,74%
	mothers	25,48%	39,79%	29,91%	13,26%	25,63%		54,61%	23,38%		20,25%	27,72%	23,69%
	non-fathers	28,65%	48,21%	38,44%	16,37%	37,29%		31,10%	35,87%		33,55%	30,33%	21,28%
	fathers	25,71%	39,38%	20,19%	11,16%	31,32%		28,48%	20,11%		15,03%	14,74%	12,54%
experience/age: (years) "number of years spent in paid work" in AT, BE, CY, CZ, EE, FR, ES, IT, LT, LU, NL, PL, PT, SI, SK; "age" in DE, DK, FI, EL, HU, IE, IS, SE, UK	men	20,72	16,42	16,19	17,88	39,99	38,21	17,11	17,42	38,73	15,64	40,09	38,43
	women	16,48	15,69	14,25	15,56	39,02	38,18	15,22	14,30	37,65	13,96	38,07	37,67
age: (years)	men	40,14	38,00	38,40	38,97	39,99	38,21	40,33	39,01	38,73	38,49	40,09	38,43
	women	39,38	37,77	37,17	38,09	39,02	38,18	39,91	38,11	37,65	37,87	38,07	37,67
	non-mothers	35,46	35,78	33,71	33,91	36,91		35,25	34,23		35,84	34,08	34,51
	mothers	44,99	46,45	45,45	44,93	45,30		45,09	45,59		45,97	45,29	44,94
	non-fathers	35,69	36,06	35,17	33,74	37,07		34,17	35,06		35,70	35,31	34,05
	fathers	46,11	46,98	46,53	45,46	46,00		45,34	46,91		46,41	46,96	45,80
part-time: (in %) if 12 months of part-time work during income reference year and less than 30 weekly hours.	men	1,68%	2,08%	0,41%	0,21%	3,72%	1,62%	0,70%	1,35%	1,33%	1,78%	0,42%	1,12%
	women	39,14%	31,69%	7,22%	5,65%	57,77%	16,10%	3,63%	18,12%	10,18%	21,26%	8,74%	6,25%
	non-mothers	26,72%	25,74%	5,59%	4,91%	43,82%		3,15%	15,97%		19,33%	7,24%	5,90%
	mothers	37,66%	45,44%	7,33%	5,40%	54,25%		2,31%	20,16%		26,24%	14,15%	4,10%
	non-fathers	2,78%	2,59%	1,41%	0,72%	4,73%		1,53%	2,16%		2,25%	1,71%	1,42%
	fathers	0,85%	1,33%	0,00%	0,86%	1,00%		1,25%	0,59%		2,23%	0,00%	1,66%

Appendix table 5a : Descriptive statistics : Austria, Belgium, Cyprus, the Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, Greece and Hungary (continued)

Sector of activity		AT	BE	CY	CZ	DE	DK	EE	ES	FI	FR	EL	HU
white-collars: (in %)	men	57,20%	50,72%	63,72%	47,03%	49,23%	53,31%	44,79%	48,13%	62,63%	56,42%	46,51%	38,60%
workers registered within ISCO codes 11 to 52*	women	70,42%	55,82%	61,60%	61,65%	66,65%	78,05%	70,87%	61,30%	82,00%	64,19%	62,33%	62,46%
	non-mothers	72,68%	56,35%	59,52%	66,61%	67,92%		72,67%	63,50%		65,05%	69,58%	66,36%
	mothers	71,60%	52,40%	58,84%	58,76%	67,72%		67,65%	49,23%		53,74%	42,72%	55,21%
	non-fathers	55,09%	47,88%	58,48%	44,37%	49,80%		42,00%	40,08%		53,17%	44,28%	40,01%
	fathers	53,84%	53,76%	49,77%	34,04%	38,52%		33,27%	35,09%		47,64%	37,01%	26,31%
Sector of activity: (in %)													
agriculture, hunting, forestry and fishing	men	1,05%	1,15%	0,79%	3,72%	1,43%	1,84%	3,89%	2,41%	1,83%	1,71%	0,74%	3,68%
	women	1,48%	0,86%	0,68%	1,88%	0,58%	0,14%	3,03%	1,41%	0,55%	1,34%	0,44%	1,68%
	non-mothers	0,71%	0,76%	0,46%	1,38%	0,55%		2,70%	1,66%		0,98%	0,45%	1,57%
	mothers	2,46%	0,67%	0,72%	3,90%	0,68%		3,66%	1,93%		1,57%	1,30%	1,11%
	non-fathers	1,40%	1,36%	1,32%	3,96%	1,54%		4,78%	3,21%		1,71%	1,93%	3,42%
	fathers	0,73%	0,41%	1,41%	7,09%	2,71%		5,71%	6,22%		4,11%	0,55%	5,15%
mining and quarrying, manufacturing, electricity, gas and water supply	men	35,57%	27,30%	13,92%	39,59%	33,06%	24,17%	32,26%	24,84%	32,33%	27,50%	20,21%	34,03%
	women	16,37%	10,22%	9,13%	26,78%	12,37%	13,48%	24,46%	12,55%	9,14%	10,73%	11,00%	21,78%
	non-mothers	17,42%	11,13%	7,91%	24,15%	12,29%		21,22%	14,83%		10,88%	10,48%	20,87%
	mothers	14,23%	5,31%	6,54%	26,17%	12,22%		25,54%	7,26%		9,75%	11,85%	27,58%
	non-fathers	37,82%	28,36%	15,04%	41,35%	31,48%		30,56%	23,86%		27,05%	19,73%	32,26%
	fathers	31,93%	28,89%	14,17%	42,71%	41,34%		32,85%	19,35%		28,80%	17,44%	42,07%
construction	men	8,56%	7,98%	18,35%	11,04%	8,43%	11,70%	16,23%	14,24%	8,47%	10,63%	9,31%	10,77%
	women	1,61%	0,48%	3,15%	2,32%	1,47%	0,53%	1,42%	2,04%	1,13%	1,91%	0,39%	1,41%
	non-mothers	1,90%	0,71%	2,71%	1,86%	1,88%		1,90%	2,14%		1,98%	0,81%	1,79%
	mothers	0,81%	0,00%	2,16%	3,07%	2,05%		1,05%	0,87%		1,80%	0,00%	0,58%
	non-fathers	9,57%	8,94%	18,87%	10,21%	8,06%		18,51%	18,63%		11,70%	12,68%	11,96%
	fathers	10,70%	9,24%	28,05%	15,62%	8,32%		18,24%	14,16%		14,29%	20,30%	11,93%
wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	men	9,91%	7,13%	18,14%	10,29%	12,50%	18,66%	11,87%	11,71%	12,68%	12,38%	18,79%	12,39%
	women	17,86%	9,89%	21,18%	12,86%	17,68%	10,73%	14,94%	15,46%	16,87%	14,63%	18,91%	17,44%
	non-mothers	15,52%	10,06%	18,40%	15,07%	16,35%		15,45%	16,90%		15,75%	22,10%	17,25%
	mothers	20,01%	8,92%	32,30%	13,57%	18,05%		14,41%	8,46%		8,80%	17,28%	12,16%
	non-fathers	9,90%	7,32%	17,56%	11,00%	12,57%		12,27%	12,09%		13,45%	19,44%	12,96%
	fathers	6,10%	2,12%	20,14%	5,49%	11,55%		10,51%	13,05%		16,17%	8,92%	7,75%

Appendix table 5a : Descriptive statistics : Austria, Belgium, Cyprus, the Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, Greece and Hungary (continued)

		AT	BE	CY	CZ	DE	DK	EE	ES	FI	FR	EL	HU
hotels and restaurants	*men*	1,89%	0,92%	5,74%	1,32%	1,37%	0,69%	1,81%	3,99%	1,45%	1,59%	3,77%	2,57%
	women	4,99%	1,35%	5,33%	3,15%	2,21%	1,08%	3,65%	6,45%	5,82%	1,75%	6,72%	3,84%
	non-mothers	4,77%	1,08%	4,27%	5,15%	2,30%		6,63%	6,41%		1,85%	6,45%	4,80%
	mothers	6,59%	1,09%	13,13%	2,31%	1,47%		4,38%	9,58%		0,59%	11,19%	4,73%
	non-fathers	2,90%	1,08%	6,44%	2,58%	2,01%		2,00%	3,69%		2,00%	6,42%	3,79%
	fathers	2,82%	1,29%	2,93%	1,71%	0,94%		0,81%	3,33%		0,93%	6,12%	1,47%
transport, storage and communication	*men*	6,61%	9,97%	6,79%	8,55%	8,79%	9,10%	11,82%	8,09%	9,41%	8,67%	7,20%	12,28%
	women	2,43%	3,28%	6,76%	4,32%	3,31%	2,11%	5,25%	4,41%	3,36%	2,89%	3,34%	4,86%
	non-mothers	2,82%	3,64%	6,47%	5,13%	4,18%		8,21%	4,94%		2,75%	4,20%	5,12%
	mothers	1,16%	1,35%	4,27%	3,86%	1,50%		3,29%	2,38%		1,95%	5,02%	5,22%
	non-fathers	5,83%	10,49%	6,27%	8,35%	8,32%		9,56%	8,26%		8,93%	9,08%	11,49%
	fathers	6,04%	10,49%	9,29%	10,86%	7,30%		17,85%	9,57%		4,96%	8,48%	13,86%
financial intermediation	*men*	3,82%	4,55%	6,34%	2,48%	4,79%	3,67%	0,89%	2,40%	1,81%	4,62%	2,17%	1,19%
	women	4,27%	5,87%	11,43%	3,04%	7,09%	3,54%	4,00%	3,28%	3,94%	6,90%	4,61%	3,18%
	non-mothers	5,76%	5,90%	9,92%	4,07%	7,28%		3,35%	2,40%		6,67%	3,87%	3,50%
	mothers	1,50%	4,33%	3,82%	2,70%	5,23%		1,66%	3,28%		3,83%	0,94%	2,96%
	non-fathers	3,32%	4,44%	4,43%	1,74%	4,82%		1,16%	2,22%		3,31%	1,61%	1,50%
	fathers	3,48%	1,37%	4,35%	0,30%	3,85%		0,00%	2,40%		3,37%	1,30%	0,92%
real estate, renting and business activities	*men*	11,65%	8,53%	4,99%	5,82%	5,74%	13,14%	7,24%	6,66%	15,15%	6,55%	4,52%	5,24%
	women	10,97%	6,07%	8,31%	3,93%	9,98%	10,21%	6,08%	9,25%	7,81%	6,57%	6,03%	7,31%
	non-mothers	11,90%	7,02%	9,93%	3,81%	10,21%		6,37%	9,25%		7,16%	9,14%	8,51%
	mothers	12,60%	4,29%	6,39%	2,65%	9,49%		4,33%	6,66%		3,64%	7,55%	4,68%
	non-fathers	9,94%	7,74%	5,93%	5,93%	6,47%		7,69%	7,25%		6,73%	4,69%	5,47%
	fathers	11,64%	7,31%	2,87%	4,38%	4,17%		2,84%	9,25%		4,19%	4,40%	2,98%
public administration, defense and compulsory social security	*men*	9,09%	14,27%	13,35%	9,94%	12,43%	3,98%	5,78%	12,44%	5,75%	13,07%	17,01%	8,00%
	women	6,78%	12,28%	11,77%	9,01%	12,83%	12,15%	6,28%	11,91%	8,89%	16,20%	10,89%	8,84%
	non-mothers	5,63%	11,17%	9,50%	8,32%	12,86%		7,14%	10,20%		15,07%	8,23%	8,35%
	mothers	6,54%	15,08%	8,83%	9,39%	15,03%		6,87%	14,41%		20,43%	10,13%	8,22%
	non-fathers	6,36%	13,05%	12,92%	7,81%	11,81%		6,28%	9,45%		12,59%	13,56%	7,85%
	fathers	13,97%	21,32%	7,62%	4,80%	13,51%		5,90%	15,29%		15,58%	27,71%	3,49%

Appendix table 5a : Descriptive statistics : Austria, Belgium, Cyprus, the Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, Greece and Hungary (end)

		AT	BE	CY	CZ	DE	DK	EE	ES	FI	FR	EL	HU
education	men	3,04%	6,58%	6,00%	2,45%	1,97%	5,97%	3,79%	5,68%	5,98%	4,27%	9,47%	4,82%
	women	8,37%	16,22%	12,35%	15,32%	7,14%	12,47%	17,76%	11,66%	12,00%	9,53%	14,61%	16,18%
	non-mothers	7,21%	14,97%	10,22%	12,30%	6,49%		14,72%	10,54%		9,92%	14,51%	13,57%
	mothers	8,63%	14,66%	10,15%	18,29%	7,48%		16,31%	9,15%		9,25%	8,18%	15,79%
	non-fathers	2,31%	5,87%	4,44%	2,18%	2,50%		3,46%	4,01%		4,31%	4,86%	3,75%
	fathers	4,43%	7,52%	2,28%	2,70%	2,87%		3,14%	4,51%		2,01%	1,69%	5,95%
health and social work	men	2,61%	6,92%	1,35%	1,78%	4,80%	4,11%	1,32%	3,29%	2,11%	4,49%	4,17%	2,59%
	women	14,18%	26,54%	6,62%	13,56%	17,48%	30,30%	8,39%	9,42%	26,99%	18,22%	14,72%	10,97%
	non-mothers	14,77%	26,21%	6,14%	14,69%	17,66%		7,34%	9,42%		17,70%	12,63%	11,31%
	mothers	15,97%	35,17%	8,62%	10,87%	18,05%		13,14%	16,01%		23,13%	10,74%	13,99%
	non-fathers	4,38%	6,02%	1,74%	1,30%	5,21%		1,35%	2,39%		3,94%	2,40%	2,26%
	fathers	1,10%	7,66%	0,57%	1,98%	1,85%		0,22%	0,83%		3,51%	2,02%	1,48%
other community, social and personal service activities; private households with employed persons; extra-territorial organisations and bodies	men	6,17%	4,68%	4,23%	3,02%	4,68%	2,97%	3,10%	4,23%	3,04%	4,52%	2,66%	2,44%
	women	10,69%	6,92%	3,29%	3,83%	7,87%	3,26%	4,73%	12,15%	3,49%	9,32%	8,35%	2,53%
	non-mothers	11,58%	7,36%	14,07%	4,06%	7,96%		4,97%	11,30%		9,30%	7,13%	3,35%
	mothers	9,51%	9,13%	3,07%	3,22%	8,74%		5,37%	20,01%		15,26%	15,80%	2,97%
	non-fathers	6,26%	5,32%	5,04%	3,61%	5,21%		2,36%	4,94%		4,28%	3,61%	3,29%
	fathers	7,07%	2,39%	6,31%	2,35%	1,59%		1,93%	2,04%		2,09%	1,08%	2,98%
supervision responsibilities: (in %)	men	48,15%	40,25%	48,15%	48,15%	48,15%	48,15%	48,15%	48,15%	48,15%	48,15%	48,15%	48,15%
	women	27,10%	19,60%	27,10%	27,10%	27,10%	27,10%	27,10%	27,10%	27,10%	27,10%	27,10%	27,10%
temporary contract: (in %) as opposed to the ref. = permanent contract	men	7,10%	3,69%	4,47%	8,44%	3,86%	0,00%	1,33%	13,85%	9,18%	5,81%	13,89%	4,53%
	women	7,57%	6,86%	5,59%	11,54%	8,32%	0,00%	0,70%	22,00%	3,74%	9,89%	22,46%	5,78%
	non-mothers	6,32%	8,56%	16,01%	12,10%	12,97%		0,71%	26,87%		12,24%	27,43%	6,09%
	mothers	9,89%	5,39%	2,42%	9,75%	6,57%		0,61%	25,00%		7,98%	29,64%	4,16%
	non-fathers	5,56%	5,56%	7,06%	11,25%	11,58%		1,90%	23,55%		8,98%	22,63%	6,45%
	fathers	4,99%	1,51%	1,83%	7,93%	1,42%		1,69%	11,69%		3,14%	20,33%	5,01%
establishment size: (nb of empl.) number of employees in the local unit	men	11,54	11,82	10,06	11,66	11,77	11,38	11,58	10,72	11,07	11,57	10,11	11,15
	women	10,38	11,51	9,81	11,08	10,45	12,19	11,37	10,02	10,38	10,90	9,11	10,58

Appendix table 5b : Descriptive statistics : Ireland, Iceland, Italy, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, Sweden, Slovenia, Slovakia and the United Kingdom

		IE	IS	IT	LT	LU	NL	PL	PT	SE	SI	SK	UK
Gross hourly wage: (in EUR)	*men*	20,90	23,41	11,66	2,41	20,64	21,03	3,30	5,29	15,32	7,61	2,45	18,70
	women	17,88	19,82	10,13	1,94	17,50	17,11	2,95	4,15	10,24	6,44	1,86	14,49
including overtime payments and premiums for shift work, night work and/or weekend work, but excluding	*non-mothers*	15,69		9,51	1,89	17,84	15,97	2,83	4,22		6,42	1,89	14,41
bonuses (i.e. irregular payments which do not occur during each pay period,	*mothers*	15,90		9,49	2,07	15,15	14,28	2,79	3,95		6,50	1,96	11,88
such as a holiday allowance, a "thirteenth month", profit sharing, etc.).	*non-fathers*	19,76		10,84	2,33	21,62	20,07	3,16	5,17		7,50	2,46	18,73
	fathers	20,96		10,82	2,22	18,66	20,85	3,18	5,05		7,77	2,49	17,62
Wage gap: (in %) (men's wage - women's wage)/women's wage	*men/women*	8,02%	8,56%	14,46%	3,25%	11,79%	18,20%	11,96%	23,86%	42,80%	20,34%	23,73%	34,54%
(non-mothers' wage - mothers' wage)/mothers' wage	*mothers/non-mothers*	-1.36%		0,22%	8.88%	17,72%	11,84%	1,47%	6,73%		-1.28%	-3.74%	21,31%
(non-fathers' wage - fathers' wage)/fathers' wage	*fathers/non-fathers*	-19.58%		-7.29%	0,73%	10,05%	-12.41%	-11.44%	-7.20%		-12.14%	-7.92%	0,31%
(fathers' wage - mothers'wage)/mothers' wage	*mothers/fathers*	31,81%		13,95%	7,26%	23,17%	50,75%	13,95%	27,64%		19,60%	26,62%	48,27%
Married: (in %)	*men*	80,84%	66,30%	89,09%	100,00%	76,70%	71,22%	96,12%	91,79%	53,69%	74,58%	99,20%	68,75%
ref.="not legally married"	*women*	80,65%	67,52%	90,27%	100,00%	76,98%	70,63%	96,39%	92,24%	53,67%	78,44%	99,39%	71,74%
	non-mothers	42,49%		53,32%	67,01%	53,01%	53,92%	64,96%	62,32%		51,40%	60,99%	47,45%
	mothers	75,26%		82,69%	73,15%	74,84%	80,17%	85,02%	84,40%		73,24%	88,10%	77,96%
	non-fathers	47,34%		53,03%	69,12%	56,80%	52,35%	65,81%	58,10%		43,63%	61,02%	48,17%
	fathers	91,79%		94,71%	97,82%	94,16%	87,78%	98,19%	95,60%		87,45%	98,74%	84,19%
education: (in %) **low**	*men*	19,66%	22,46%	37,27%	4,80%	33,17%	18,14%	3,13%	66,89%	9,40%	8,47%	1,03%	10,23%
lower secondary at most	*women*	12,36%	27,01%	29,46%	2,59%	32,39%	12,45%	2,52%	61,00%	6,23%	14,40%	2,31%	7,65%
	non-mothers	12,06%		24,72%	3,81%	29,91%	13,98%	2,45%	52,32%		9,36%	1,02%	7,60%
	mothers	35,81%		53,83%	1,11%	53,01%	40,82%	6,21%	79,10%		23,55%	4,58%	19,23%
	non-fathers	21,09%		42,46%	8,24%	29,11%	19,92%	5,40%	66,66%		12,48%	1,03%	10,87%
	fathers	46,62%		59,79%	1,85%	59,36%	34,00%	8,19%	87,72%		9,22%	1,96%	27,43%

Appendix table 5b : Descriptive statistics : Ireland, Iceland, Italy, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, Sweden, Slovenia, Slovakia and the United Kingdom (continued)

		IE	IS	IT	LT	LU	NL	PL	PT	SE	SI	SK	UK
medium	men	25,13%	36,04%	38,44%	40,74%	38,41%	38,55%	67,73%	18,70%	47,19%	69,50%	81,82%	44,37%
upper secondary at most	women	28,22%	22,75%	38,15%	24,17%	38,18%	45,80%	52,07%	17,85%	47,64%	51,70%	77,82%	44,28%
	non-mothers	28,89%		41,30%	27,19%	38,21%	44,13%	48,33%	22,39%		53,80%	73,20%	44,38%
	mothers	21,09%		33,36%	25,16%	37,55%	36,85%	65,45%	11,72%		57,76%	80,20%	49,37%
	non-fathers	31,62%		37,70%	41,28%	41,23%	42,98%	69,84%	20,16%		68,84%	81,21%	43,06%
	fathers	20,16%		29,16%	47,50%	34,95%	45,40%	78,42%	8,47%		72,98%	80,19%	40,49%
high	men	55,21%	41,50%	24,29%	54,45%	28,42%	43,31%	29,14%	14,40%	43,42%	22,03%	17,15%	45,41%
post-secondary tertiary or non-tertiary	women	59,42%	50,25%	32,39%	73,25%	29,44%	41,76%	45,41%	21,16%	46,13%	33,90%	19,87%	48,07%
education	non-mothers	59,05%		33,98%	69,00%	31,88%	41,90%	49,22%	25,29%		36,84%	25,78%	48,03%
	mothers	43,10%		12,82%	73,73%	9,44%	22,33%	28,34%	9,18%		18,68%	15,21%	31,41%
	non-fathers	47,30%		19,84%	50,48%	29,66%	37,10%	24,76%	13,18%		18,67%	17,76%	46,07%
	fathers	33,22%		11,05%	50,65%	5,68%	20,60%	13,39%	3,81%		17,80%	17,85%	32,07%
experience/age: (years)	men	38,24	37,73	16,30	17,21	18,15	14,82	16,29	18,22	37,70	17,52	20,12	37,25
"number of years spent in paid work" in AT, BE, CY, CZ, EE, FR, ES, IT, LT, LU, NL, PL, PT, SI, SK; "age" in DE, DK, FI, EL, HU, IE, IS, SE, UK	women	37,41	37,27	13,28	16,10	15,04	12,85	14,68	15,62	36,76	16,79	18,98	36,81
age: (years)	men	38,24	37,73	39,82	40,57	36,30	39,09	38,31	38,14	37,70	39,53	40,61	37,25
	women	37,41	37,27	38,49	40,16	35,08	37,63	37,76	37,56	36,76	39,11	39,81	36,81
	non-mothers	33,53		35,24	35,66	35,50	35,69	34,26	33,72		35,68	33,48	35,22
	mothers	46,16		45,61	45,35	45,59	46,22	45,61	45,46		44,81	45,09	45,43
	non-fathers	33,61		35,72	34,92	36,16	36,91	33,95	33,80		36,47	33,86	35,38
	fathers	46,24		46,76	45,75	46,29	46,07	46,20	46,29		46,22	46,13	45,79
part-time: (in %)	men	2,04%	0,63%	1,24%	1,11%	0,45%	2,57%	1,07%	0,00%	1,66%	0,10%	0,09%	0,52%
if 12 months of part-time work during	women	31,08%	16,14%	17,96%	5,78%	39,64%	62,21%	5,83%	3,73%	19,66%	0,51%	2,93%	31,22%
income reference year and less	non-mothers	27,28%		14,30%	5,26%	31,20%	52,35%	6,37%	3,99%		0,85%	2,29%	29,00%
than 30 weekly hours.	mothers	44,36%		14,52%	5,75%	52,95%	65,60%	5,87%	4,12%		0,58%	3,98%	28,45%
	non-fathers	5,00%		1,90%	2,48%	1,01%	3,68%	2,36%	0,75%		0,11%	0,41%	2,51%
	fathers	2,53%		0,32%	0,72%	0,06%	2,58%	0,43%	0,00%		0,00%	0,60%	1,60%

Appendix table 5b : Descriptive statistics : Ireland, Iceland, Italy, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, Sweden, Slovenia, Slovakia and the United Kingdom (continued)

Sector of activity		IE	IS	IT	LT	LU	NL	PL	PT	SE	SI	SK	UK
white-collars: (in %) workers registered within ISCO codes 11 to 52*	men	60,03%	66,07%	45,34%	41,50%	56,00%	63,83%	48,34%	33,92%	62,73%	48,39%	39,07%	63,53%
	women	76,04%	81,23%	59,22%	65,91%	64,93%	74,49%	70,89%	48,54%	80,29%	62,08%	67,42%	71,93%
	non-mothers	73,87%		62,01%	66,62%	64,19%	78,80%	72,84%	55,91%		68,37%	69,94%	70,61%
	mothers	71,32%		49,63%	69,86%	50,86%	71,59%	60,09%	42,83%		52,20%	65,40%	65,54%
	non-fathers	48,52%		40,54%	39,22%	53,43%	59,83%	40,42%	33,04%		44,46%	42,22%	62,58%
	fathers	47,67%		29,89%	32,10%	48,32%	41,91%	30,56%	23,80%		39,15%	34,40%	52,90%
Sector of activity: (in %) agriculture, hunting, forestry and fishing	men	2,62%	4,85%	2,80%	5,17%	0,32%	1,51%	2,12%	1,95%	0,73%	0,28%	4,58%	1,92%
	women	0,54%	1,17%	3,63%	3,49%	0,03%	1,09%	1,11%	2,34%	0,34%	0,62%	1,73%	1,09%
	non-mothers	1,17%		2,85%	2,89%	0,02%	0,79%	0,73%	1,21%		0,70%	1,10%	1,24%
	mothers	0,00%		8,06%	3,23%	0,69%	1,75%	2,18%	4,32%		0,61%	2,41%	1,10%
	non-fathers	2,50%		3,44%	7,73%	0,59%	1,96%	2,30%	1,95%		0,78%	3,50%	1,78%
	fathers	1,10%		4,11%	2,74%	0,00%	0,64%	3,03%	4,78%		1,08%	5,88%	2,06%
mining and quarrying, manufacturing, electricity, gas and water supply	men	17,05%	15,32%	36,26%	25,38%	9,97%	25,08%	35,79%	26,46%	26,53%	40,67%	36,76%	23,73%
	women	8,31%	11,64%	21,64%	24,08%	4,48%	11,34%	19,97%	27,48%	13,61%	30,24%	19,13%	8,54%
	non-mothers	9,25%		21,45%	23,49%	5,17%	50,02%	19,62%	22,78%		25,58%	21,41%	8,66%
	mothers	11,68%		15,32%	25,37%	0,20%	75,32%	21,36%	26,04%		34,62%	18,97%	7,24%
	non-fathers	16,83%		33,55%	22,87%	15,14%	57,78%	38,20%	26,74%		40,74%	35,81%	22,16%
	fathers	17,92%		28,64%	31,80%	20,53%	81,58%	41,10%	28,99%		45,05%	41,56%	27,27%
construction	men	15,06%	12,23%	6,50%	17,40%	19,31%	9,19%	8,34%	18,12%	9,66%	8,58%	11,85%	10,44%
	women	0,47%	0,00%	1,04%	1,16%	0,82%	1,20%	1,62%	1,64%	0,85%	0,73%	1,05%	1,60%
	non-mothers	0,88%		1,21%	1,31%	1,18%	0,50%	1,50%	2,05%		1,40%	1,33%	1,56%
	mothers	0,00%		0,19%	1,47%	1,40%	0,00%	1,28%	0,00%		0,68%	0,76%	2,02%
	non-fathers	20,71%		11,65%	19,08%	14,97%	5,21%	10,96%	20,90%		9,90%	11,08%	8,78%
	fathers	15,97%		13,86%	23,20%	15,76%	3,53%	11,03%	21,57%		9,79%	13,06%	14,09%
wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	men	12,00%	17,66%	7,99%	14,10%	8,61%	11,99%	11,40%	14,88%	15,01%	10,30%	8,64%	11,56%
	women	10,14%	10,67%	11,74%	16,03%	15,21%	13,07%	15,65%	13,53%	11,33%	13,68%	13,58%	14,91%
	non-mothers	14,56%		14,42%	17,95%	13,30%	7,21%	18,19%	15,44%		14,61%	14,79%	13,79%
	mothers	13,42%		9,04%	13,01%	29,73%	4,68%	13,04%	9,59%		12,90%	11,97%	18,38%
	non-fathers	14,63%		10,15%	14,77%	8,91%	6,69%	12,83%	16,22%		11,23%	10,19%	13,55%
	fathers	10,77%		7,41%	7,40%	9,46%	1,87%	7,08%	14,31%		8,89%	8,55%	11,98%

Appendix table 5b : Descriptive statistics : Ireland, Iceland, Italy, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, Sweden, Slovenia, Slovakia and the United Kingdom (continued)

		IE	IS	IT	LT	LU	NL	PL	PT	SE	SI	SK	UK
hotels and restaurants	men	5,79%	0,89%	1,61%	0,90%	4,38%	1,75%	0,89%	2,77%	0,54%	2,63%	1,29%	1,77%
	women	7,53%	1,83%	3,81%	3,19%	3,49%	1,43%	2,40%	6,14%	2,20%	3,55%	2,96%	2,91%
	non-mothers	7,06%		3,88%	4,04%	3,51%	1,24%	2,58%	7,05%		4,08%	4,72%	3,52%
	mothers	6,67%		6,71%	6,02%	1,54%	0,52%	3,01%	6,59%		4,48%	3,04%	4,74%
	non-fathers	5,26%		2,44%	1,89%	3,54%	1,40%	1,27%	2,86%		2,38%	3,48%	2,60%
	fathers	3,22%		1,74%	1,13%	15,39%	0,76%	0,56%	4,16%		2,67%	0,85%	0,67%
transport, storage and communication	men	5,48%	9,50%	7,30%	12,15%	7,41%	9,15%	10,11%	9,25%	8,07%	8,32%	11,96%	8,57%
	women	3,35%	5,43%	3,12%	2,38%	2,32%	3,26%	4,81%	1,32%	4,36%	3,97%	5,03%	3,52%
	non-mothers	2,95%		2,83%	3,43%	3,92%	1,67%	4,13%	2,75%		4,15%	5,79%	3,87%
	mothers	4,00%		2,04%	3,09%	0,94%	0,00%	5,85%	0,29%		3,01%	3,90%	2,47%
	non-fathers	6,60%		7,22%	10,68%	9,72%	3,98%	9,30%	7,47%		8,12%	9,82%	9,05%
	fathers	12,03%		6,89%	16,06%	4,39%	5,25%	15,91%	8,13%		9,42%	11,06%	15,85%
financial intermediation	men	7,37%	5,29%	4,20%	1,43%	16,84%	3,97%	2,16%	2,68%	2,57%	3,02%	1,03%	4,84%
	women	8,58%	7,70%	4,20%	2,13%	12,33%	4,94%	4,51%	3,73%	2,06%	4,39%	2,70%	6,38%
	non-mothers	7,95%		4,58%	2,39%	13,10%	2,48%	4,77%	3,43%		5,29%	3,77%	6,75%
	mothers	4,87%		2,38%	1,86%	2,92%	0,31%	3,19%	1,04%		5,72%	1,88%	2,00%
	non-fathers	6,06%		3,12%	1,60%	13,50%	1,91%	1,71%	1,79%		2,45%	1,23%	5,35%
	fathers	4,35%		0,61%	0,00%	4,75%	0,00%	1,11%	0,00%		2,59%	0,31%	1,60%
real estate, renting and business activities	men	9,57%	16,56%	4,38%	1,76%	6,67%	14,98%	5,86%	5,80%	16,76%	8,11%	4,52%	12,67%
	women	12,24%	9,87%	6,10%	3,24%	12,53%	9,33%	5,19%	7,17%	11,72%	7,13%	4,16%	11,21%
	non-mothers	13,64%		7,76%	3,88%	11,12%	6,03%	5,50%	9,06%		7,75%	4,94%	12,11%
	mothers	4,05%		4,88%	1,95%	17,90%	3,00%	3,86%	3,65%		5,22%	4,89%	6,67%
	non-fathers	10,06%		5,31%	2,73%	5,78%	8,98%	5,43%	4,68%		8,92%	5,18%	12,99%
	fathers	0,81%		2,19%	0,54%	2,63%	3,45%	2,69%	2,42%		6,03%	4,41%	3,31%
public administration, defense and compulsory social security	men	12,34%	4,66%	12,85%	10,39%	12,17%	10,50%	11,89%	11,20%	5,65%	8,25%	11,43%	10,71%
	women	11,52%	7,21%	7,64%	8,35%	7,57%	7,50%	7,47%	5,01%	6,03%	9,46%	18,16%	12,10%
	non-mothers	9,14%		6,54%	7,11%	7,43%	4,16%	7,95%	4,52%		10,02%	14,28%	11,53%
	mothers	11,89%		7,28%	5,45%	6,42%	0,94%	6,97%	9,36%		4,60%	19,97%	11,37%
	non-fathers	8,74%		10,11%	9,60%	13,51%	5,08%	8,95%	10,44%		6,58%	11,15%	8,88%
	fathers	13,89%		19,05%	2,72%	19,41%	0,61%	6,74%	12,34%		6,27%	7,83%	9,79%

Appendix table 5b : Descriptive statistics : Ireland, Iceland, Italy, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, Sweden, Slovenia, Slovakia and the United Kingdom (end)

		IE	IS	IT	LT	LU	NL	PL	PT	SE	SI	SK	UK
education	*men*	4,99%	4,76%	4,29%	4,31%	3,25%	3,92%	4,52%	3,42%	7,09%	4,03%	3,32%	4,20%
	women	9,66%	11,72%	14,43%	17,11%	9,40%	11,10%	20,73%	10,87%	16,89%	13,87%	15,25%	15,63%
	non-mothers	9,35%		11,44%	15,23%	11,51%	5,27%	18,90%	10,85%		13,07%	12,79%	14,18%
	mothers	7,02%		18,31%	22,74%	3,73%	2,02%	20,06%	17,26%		11,82%	15,98%	19,70%
	non-fathers	3,68%		2,78%	2,89%	3,70%	2,31%	3,68%	3,44%		3,22%	3,04%	4,74%
	fathers	6,84%		3,18%	8,00%	0,22%	0,62%	4,08%	0,44%		3,72%	2,09%	3,48%
health and social work	*men*	5,73%	3,71%	5,53%	2,99%	3,38%	5,23%	3,34%	2,18%	3,90%	2,23%	2,06%	5,97%
	women	23,14%	24,42%	13,59%	13,62%	19,36%	33,54%	12,00%	14,34%	25,96%	9,62%	11,70%	18,23%
	non-mothers	18,33%		12,94%	13,33%	19,04%	18,10%	11,41%	14,24%		9,72%	9,66%	18,15%
	mothers	33,01%		10,81%	8,36%	22,16%	10,17%	14,64%	15,63%		13,01%	12,97%	21,92%
	non-fathers	3,07%		3,75%	2,03%	4,20%	2,82%	2,33%	2,16%		2,36%	2,08%	5,70%
	fathers	4,10%		3,48%	0,90%	0,13%	0,00%	2,67%	0,72%		1,83%	2,22%	4,10%
other community, social and personal service activities; private households with employed persons; extra-territorial organisations and bodies	*men*	1,99%	4,56%	6,29%	4,02%	7,69%	2,72%	3,58%	1,31%	3,49%	3,57%	2,56%	3,64%
	women	4,51%	8,35%	9,05%	5,21%	12,48%	2,19%	4,56%	6,41%	4,65%	2,73%	4,55%	3,87%
	non-mothers	5,72%		10,10%	4,97%	10,70%	2,53%	4,72%	6,62%		3,63%	5,43%	4,63%
	mothers	3,39%		15,00%	7,46%	12,37%	1,28%	4,56%	6,22%		3,34%	3,26%	2,40%
	non-fathers	1,86%		6,49%	4,14%	6,44%	1,89%	3,04%	1,35%		3,34%	3,44%	4,44%
	fathers	9,00%		8,84%	5,51%	7,32%	1,70%	4,00%	2,14%		2,67%	2,18%	5,82%
supervision responsibilities: (in %)	men	48,15%	59,63%	37,18%	21,50%	40,41%	40,83%	29,05%	26,73%	28,82%	41,70%	18,89%	50,15%
	women	27,10%	52,69%	16,78%	13,81%	17,87%	20,41%	20,17%	13,52%	18,41%	29,63%	13,17%	32,36%
temporary contract: (in %) as opposed to the ref. = permanent contract	men	1,40%	5,19%	24,92%	8,25%	3,08%	8,88%	23,04%	12,06%	4,36%	5,96%	7,20%	2,34%
	women	4,12%	6,05%	24,58%	4,44%	4,11%	9,31%	21,75%	17,66%	9,47%	6,08%	8,43%	3,06%
	non-mothers	6,84%		20,01%	7,20%	5,27%	11,09%	20,94%	25,38%		9,26%	10,91%	4,38%
	mothers	4,78%		16,34%	5,99%	5,09%	11,12%	11,71%	11,06%		5,68%	6,46%	1,43%
	non-fathers	3,30%		14,52%	10,60%	5,84%	10,10%	22,98%	22,48%		8,65%	11,72%	3,75%
	fathers	0,56%		10,83%	4,51%	0,22%	9,45%	13,39%	6,46%		3,00%	4,92%	0,00%
establishment size: (nb of empl.) number of employees in the local unit	men	11,02	10,77	10,97	11,94	11,36	12,77	10,21	10,85	11,10	11,53	10,13	13,58
	women	11,07	10,93	10,31	11,49	10,22	12,79	9,70	10,59	11,03	11,45	9,40	13,67

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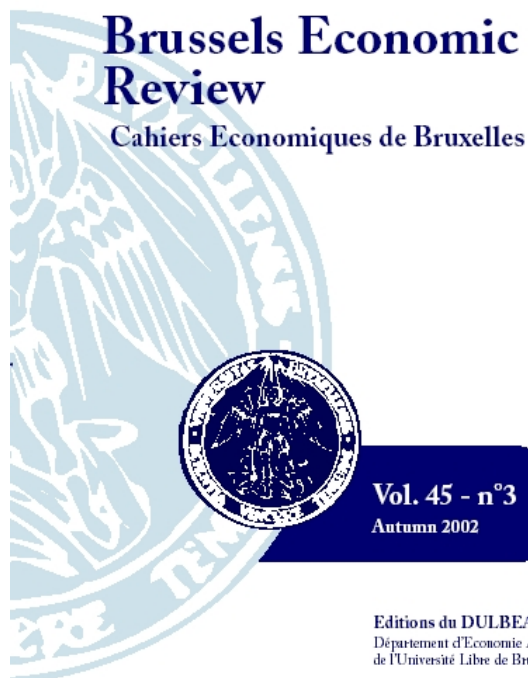
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